

A Study of Cooperative Milk Marketing Associations in Four Ohio Markets

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A STUDY OF COOPERATIVE MILK MARKETING ASSOCIATIONS IN FOUR OHIO MARKETS

R. W. SHERMAN

INTRODUCTION

MILK MARKETING COOPERATION IN OHIO

For this study of milk marketing cooperatives in Ohio, the Akron, Dayton, Portsmouth, and Columbus markets were chosen as representative markets of the State. Approximately 18 per cent of the total milk purchasing population of Ohio is represented by these four markets.

Ohio has had a large number of fluid milk marketing cooperatives for a period of over a decade. Many of these associations were formed between 1920 and 1925. A few date back several years prior to 1920, and some of those now doing business are outgrowths of earlier attempts to organize in which the old association was a very loose type of organization. These old associations either passed out of existence entirely or were reorganized and incorporated as the present organization.

There are at present¹ 22 cooperative milk marketing organizations which were established before the passage of the Ohio milk marketing control law.² In addition to these there are 24 new cooperative milk marketing organizations which have been formed since the passage of the control law.³ These new organizations have been formed mostly in the smaller markets but partly in territories where other associations have been operating for some time. There are two cooperatives in the State which handle only cream, one operating in Gallia County and the other mainly in Muskingum, Guernsey, Morgan, Coshoc-ton, and Noble Counties. Figure 1 shows the approximate territories in which the 22 associations formed before the Ohio milk marketing control law have membership and the overlapping of these territories. In several instances, there are as many as four associations with membership in the same territory. Figure 2 shows the membership territory of the newer associations, nine of which operate in territory in no way covered by another milk marketing association. Figure 3 shows the territories included in this study.

Dairy marketing cooperative associations cover the State almost solidly, except for some sections of southeastern Ohio where the population is comparatively sparse and production and sale of whole milk are relatively low. Milk sheds overlap to some extent in northeastern Ohio, which is predominantly industrial and where the cities are close together and dairying is an important farm enterprise.

The milk marketing cooperative associations in Ohio vary in size from a few small associations formed within the last 2 years with as few as 20 to 30 members to the larger ones of the older organizations having upwards of 3000 members. The best estimates of the number of active members of milk marketing cooperatives in Ohio indicate that it is somewhere near 29,000.

¹As of January, 1936.

²Burk Act, passed July, 1933, effective until June 30, 1935 (House Bill 671).

³See appendix for complete list of associations.

About 4500 of these members are of the new associations formed within the last 2 years. The 1930 Agricultural Census reports 63,804 milk producers selling whole milk in Ohio; therefore, about 45 per cent of the milk producers of this State sell their milk cooperatively. The percentage of milk handled cooperatively is higher than this.

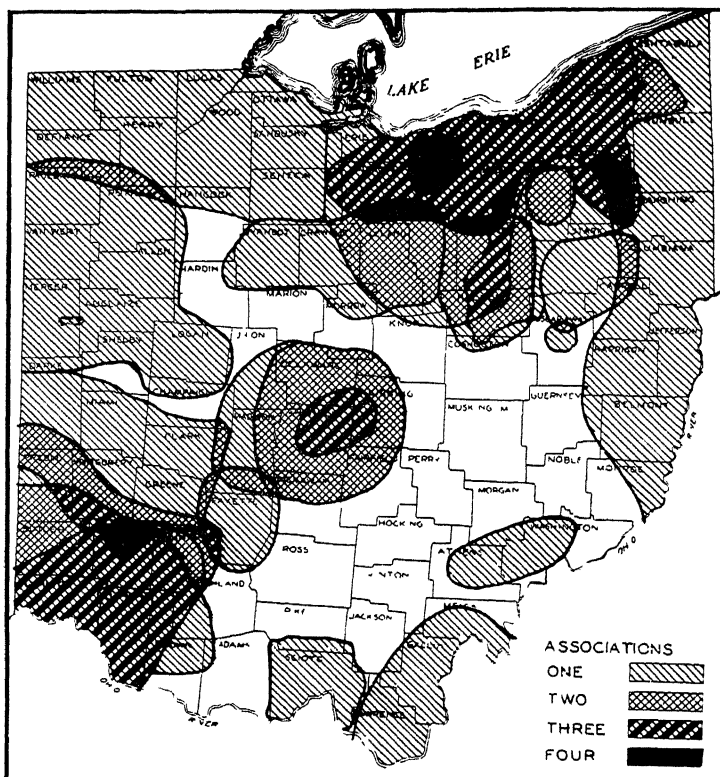


Fig. 1.—Approximate membership territory of cooperative milk marketing associations which were operating at time of study (1935) and which were formed before July 1, 1933

Statistics on the growth of milk marketing cooperatives reveal that in 1915 there were three, in 1920 there were six, and in 1925 there were 14—rapid growth having taken place during the latter 5-year period. This number had increased to 15 by 1930, exclusive of three sour cream organizations.

During the next 5 years two influences contributed to a rapid growth in number of associations. Dissatisfaction with prices due to the depression caused several new associations to be started as split-offs from existing cooperatives. Moreover, the State milk marketing control law (Burk Act) went into effect in 1933 with local control features and the State was finally divided into 68 marketing areas. Where old established associations existed, they represented their producers in helping to draft rules for that area and putting these

rules into effect. Because the producers of the areas where no association existed felt the need of this same kind of representation, many new associations were formed. By 1935 the total number of associations had increased to 46.

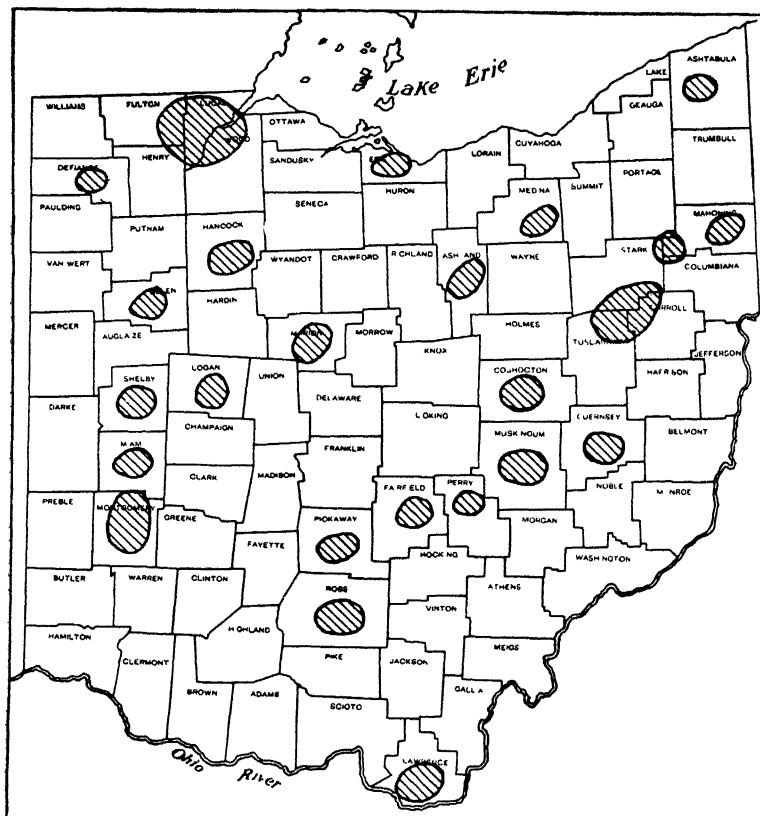


Fig. 2.—Approximate membership territory of cooperative milk marketing associations which were operating at time of study and which were formed after July 1, 1933

Over half of the newer associations are not incorporated but are doing business as organized groups; most of these will probably be incorporated some time in the near future if the association proves of value to the producers.

Milk marketing cooperatives in Ohio represent almost all types from purely bargaining cooperatives to those which process and retail the milk. Some do nothing but bargain for the sale of their members' milk, others do the testing for their members, and some control the hauling and have field men in addition to these other services. A few of the associations have facilities to handle their own surplus milk; others both distribute their milk and care for their surplus. The cost of operating these different types of associations varies according to the amount of service rendered.

Some of the more important problems faced by associations are those of finance, decision as to what function to perform, relations with their membership, surplus milk, the advent of State control of milk marketing, and problems caused by the producers who are not members.

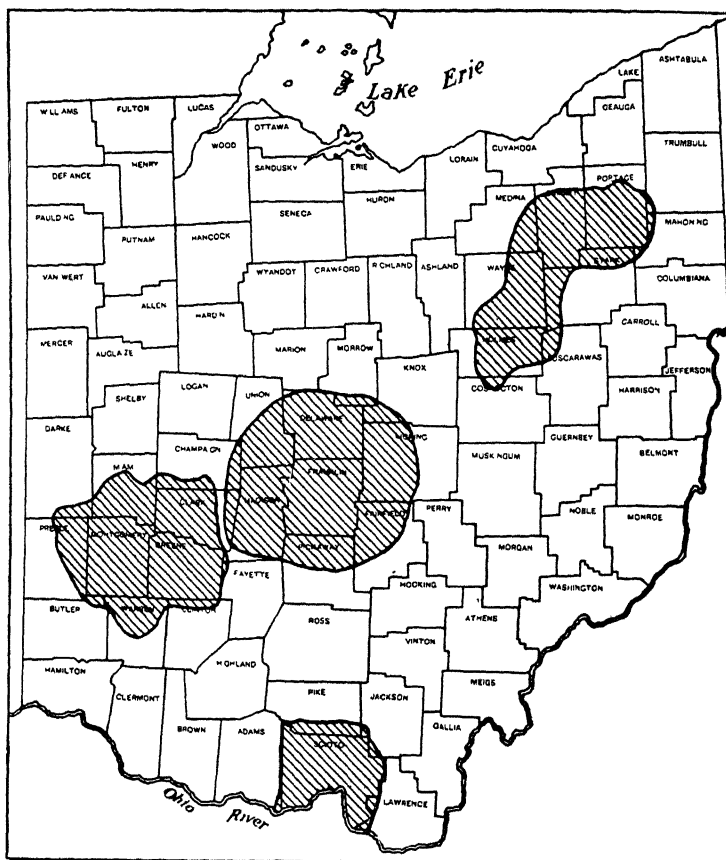


Fig. 3.—Approximate milk sheds of the markets in which this study was made

PURPOSE OF STUDY

The purpose of this study is to analyze as far as possible the progress and effectiveness, as well as satisfaction to producers, of cooperative milk marketing associations in Ohio as represented by the four markets studied. Statistical data are used where possible and where available to measure what the association has done. An attempt was also made to learn by interview with members of associations what they know of their association and how they evaluate the various services and activities of their organization in marketing their milk.

Some of the functions given special study were plans of marketing, sampling and testing, transportation, and membership relations. In addition to these, quality improvement, cooperative purchasing of supplies, and legislative

activities have been analyzed. These latter are minor activities in most of the associations included in this study and are comparatively unimportant in comparison to the first named functions.

SCOPE OF STUDY

Of the problems mentioned above all have been included in this study with the exception of the financial setup of the association, which is given mention only as it affects the members by the amount of deductions from their checks.

The four markets included in this study were selected as representing as nearly as possible the conditions existing in different sections of Ohio. Akron was selected as representative of northeastern Ohio, where dairying is more intensive than in any other part of the State. Almost 40 per cent of the milk sold in fluid form in Ohio is produced in the northeastern one-fourth of the State. The milk shed for this market is limited on all sides by the sheds of adjoining markets. Milk production in this area is a well established business with farmers, as this is in the oldest dairying section in Ohio. Columbus is a market which has a practically unlimited milk shed. Enough milk is produced within 25 or 30 miles of Columbus more than to supply the fluid needs of that market and there are no other major markets within 45 miles. Milk production for fluid sale in the Columbus milk shed has been developed on an intensive basis much more recently than in northeastern Ohio.

The Dayton market is representative of southwestern Ohio and its shed is limited on the south by Cincinnati and, to some extent, on the east by Springfield. The producers of this milk shed depend least on dairying for their income of the four markets included in this study. Portsmouth was selected because it is one of the few small markets where a cooperative association has been able to function successfully. The milk shed of Portsmouth is not limited by any adjoining markets but practically is limited by the terrain.

Information and data were obtained from two sources: (a) Data on the association's operations, as well as information as to association policies, were secured from the offices of the different associations; (b) records or schedules were obtained from producers in each market by personal interviews concerning their views and attitude toward their association and its activities.

Producers of each market were divided into three groups to determine the difference of opinions; the division was made on the basis of three factors: (a) Farming ability as evidenced by the general appearance of the farm; (b) milk producing ability as evidenced by the appearance of dairy equipment, dairy barn, milk house, etc.; (c) knowledge of dairy marketing problems and acquaintance with the association. For all practical purposes this proved a very satisfactory method for determining in what group to include the member. Group I is the highest rating group, Group II the second high, and Group III the lowest. This division of producers was carried out throughout the study and the tables set up accordingly. The classification was made on an arbitrary basis at the time of the interview. Of the 652 members interviewed, 213 were included in Group I, 325 in Group II, and 114 in Group III.

A sufficient number of members was visited so that a representative cross section was obtained, and approximately the same percentage relationship would exist for the whole market as for the sample included in this study. In the Akron market 216 producers were visited, in the Columbus market 177, in the Dayton market 183, and in the Portsmouth market 76. Five of those visited were not members at the time but had been until recently. In most instances these five producers are treated as members.

THE FLUID MILK INDUSTRY OF THE FOUR OHIO MARKETS STUDIED

Dairying is the most important cash income enterprise of farmers in the areas of at least three of the four markets studied. Fluid milk sales constituted from 74 to 95 per cent of the cash income from dairy products in these areas and milk was the most valuable single agricultural product sold within the milk sheds of these markets. Dairy products from these areas accounted for over 34 per cent of their total agricultural income.⁴

FLUID MILK REQUIREMENTS AND SIZE OF DAIRY HERDS

The figures on population in Table 1 are based on the 1930 Population Census. The population has not changed radically within any of the four market areas since this Census was taken. The daily milk requirements are calculated by the approximate average use in Ohio of three-fourths pound per day per capita.

TABLE 1.—Milk Purchasing Population and Fluid Milk Requirements of the Four Markets

Market area	Milk purchasing population	Milk requirements per year	Requirements as per cent of production in milk shed
		(1000 lb.)	
Akron.....	335,460	91,832	26.7
Dayton.....	256,814	70,303	17.9
Portsmouth.....	67,794	18,559	39.1
Columbus.....	346,604	94,883	24.0
Total.....	1,006,672	275,577	23.4

The average daily production of milk per farm of farms supplying milk for the Akron market area was 98 pounds, for Dayton 92 pounds, for Portsmouth 133 pounds, and for the Columbus area 137 pounds in the year 1934. The low point of production in most Ohio market areas is in the late fall or winter. During the shortage months the daily production per farm is considerably less than these figures and the number of farms necessary to supply the markets' needs is higher than during the spring and summer months.⁵

The figures in Table 2 are derived from the 1930 Census of Agriculture. To obtain figures for each market the figures for the counties from which these markets get most of their milk are combined. The four markets do not draw from the entirety of each county represented but obtain a large amount from each of the counties.

The amount of milk produced in the milk sheds of the four markets is several times the market requirement for sale as fluid milk and cream. In the Akron shed the production as shown includes considerable portions of three counties which supply milk for other nearby markets. In the other three markets very little of the production as given is within the boundaries of any other market shed.

⁴Mimeo. Bull. 60 of the Department of Rural Economics, the Ohio State University and Ohio Agricultural Experiment Station.

⁵Ohio Experiment Station Bulletin 523, "Sources of Market Milk and Butterfat in Ohio," Table 22.

TABLE 2.—Number of Farms, Number of Cows, and Milk Production and Sales in the Milk Shed of Four Ohio Markets*

Market area	Number of farms	Number of cattle	Production daily	Per cent of production sold as whole milk
			<i>Lb.</i>	
Akron.....	8,941	53,740	942,794	75
Dayton.....	13,845	68,182	1,074,536	59
Portsmouth.....	2,938	9,523	129,954	50
Columbus.....	14,000	73,260	1,082,224	59

*Source—1930 Census of Agriculture.

DISTRIBUTION OF MILK IN THE FOUR MARKETS

In none of the four markets is the physical layout of the city such as to make the cost of distribution excessive. An average size of load large enough to be efficient is possible in any of these markets. The amount of milk handled through stores in Ohio varies from less than 10 per cent in some markets to about 50 per cent in some others.

TABLE 3.—Number of Different Agencies Retailing Milk in Four Ohio Market Areas* and Percentage Sold Through Stores

Market area	Distributor	Producer-distributor	Stores handling milk	Per cent sold through stores (estimated)
Akron.....	19	31	1000	9
Dayton.....	26	70	800	37
Portsmouth.....	4	35	225	47
Columbus.....	30	35	1025	40

*From report of licenses issued by Ohio Milk Marketing Commission, 1935.

The figures on per cent of milk sold through stores are approximations as there are no available statistics giving an accurate account. Five of the major markets of Ohio have store differentials. By store differential is meant a lower price for milk to be sold through stores than for that delivered. Of the four markets included in this study, Dayton and Columbus have store differentials while Akron and Portsmouth do not. This differential is one cent per unit and under Ohio Milk Marketing Commission orders applied only to cash and carry trade.

Of the four markets, Portsmouth is the only one in which there is no dealers' organization. The dealers' organizations in the other three markets are not represented by a 100 per cent membership but are workable organizations of a majority of the dealers.

HEALTH REGULATIONS

In the Akron market free inspection is provided up to 60 miles from the city and had been, until recently, provided up to 100 miles. For practical purposes the regulations have had very little effect in limiting the market shed. The investment in necessary equipment has not been any more burdensome than in any of the adjoining markets or in any of the other three markets studied.

The Dayton Health Department has placed no territorial limitations on inspection, but the Columbus Health Department charges additional for inspection beyond 50 miles. The Portsmouth regulations set up a definite territorial limit for free inspection. Beyond this area the application must be accompanied by a \$10 deposit and the inspection charged for at the rate of \$1.50 per hour. In this market, if a producer is cut off for poor sanitary practices three times, he is permanently barred from the market. No one has yet been barred. No calls by new producers for inspection have been made for over 2 years. The general conformity of the country surrounding the Portsmouth market, combined with the Health Department regulations, makes a practically closed market. Those producers within the milk shed who are not now selling into the fluid market have an average of less than two cows per farm and in very few cases could they be considered potential producers for the fluid market.

OUTLETS FOR FLUID MILK

In the Akron market area there are three types of outlets for fluid milk. The most important of these is for fluid consumption in the cities of Akron, Cleveland, and their suburbs. The Canton, Alliance, and Youngstown markets are also close to this area. The Swiss cheese industry has developed along the southern part of this area and some factories have been built within it. This type of outlet has become important as the quality of the cheese has improved, and the market easily absorbs all the product. These factories have been operated as surplus or summer production plants and have been able to absorb a large amount of milk in surplus production months. One large condensery is situated near Akron and has had a working agreement with the Milk Producers' Association of Summit County and Vicinity whereby it uses a large amount of the Association's surplus in the summer months.

There is no important outlet for fluid milk for Dayton shippers except for fluid consumption. One or two of the distributors handle a small portion of their surplus by condensing it. The Miami Valley Cooperative Milk Producers Association separates a small amount of surplus milk when necessary and churns this in its own butter plant.

There are two important outlets for fluid milk for the Columbus market. The first one is that of milk for fluid consumption and the other is the manufacturing outlet. There are three large concentrated milk plants within and close to the Columbus milk shed. These plants are able to handle a large amount of milk and provide an outlet for as many producers within the Columbus market shed as wish to sell this way.

In the Portsmouth market there is only the outlet for fluid consumption. Milk production for fluid sale in this part of the State is necessarily confined to a few small valleys, and for this reason no other important outlets have developed.

GENERAL INFORMATION ON MEMBERS INTERVIEWED

The farms of all producers interviewed in this study averaged 17.5 miles from the market. The average distance in the Portsmouth milk shed was 13.7 miles, for Dayton 16.9 miles, for Akron 18.1 miles, and for Columbus 18.9 miles.

In Table 4 is a classification of the members interviewed by ownership or tenancy. There were 136 tenants, or 20.9 per cent of the total for all four markets. This percentage varied from 6.6 in the Portsmouth market to 31.1 in the Dayton market. By groups, the variation was from 16 per cent for Group I to 30.7 per cent for Group III members.

TABLE 4.—Classification of 652 Milk Association Members by Ownership or Tenancy in the Akron, Dayton, Portsmouth, and Columbus Markets, by Groups

Market	Group			Total
	I	II	III	
Akron				
Owners	61	89	22	172
Tenants	13	23	8	44
Per cent tenants	17.6	20.5	26.7	20.4
Dayton				
Owners	38	75	13	126
Tenants	15	31	11	57
Per cent tenants	28.3	29.2	45.8	31.1
Portsmouth				
Owners	13	46	12	71
Tenants		3	2	5
Per cent tenants		6.1	14.3	6.6
Columbus				
Owners	67	48	32	147
Tenants	6	10	14	30
Per cent tenants	8.2	17.2	30.4	16.9
Four Markets				
Owners	179	258	79	516
Tenants	34	67	35	136
Per cent tenants	16.0	20.6	30.7	20.9

The 652 members included in this study had a total of 7068 cows in 1935, or an average of 10.8 per farm. The data in Table 5 include total number of cows and the average number per farm, by groups.

TABLE 5.—Total Number of Dairy Cows and Number per Farm on Farms of 652 Members in Four Ohio Markets, by Group, 1935

	Group			Total
	I	II	III	
Akron				
No. of members	74	112	30	216
Total cows	971	1073	226	2270
Cows per farm (av.)	13.1	9.6	7.5	10.5
Dayton				
No. of members	53	106	24	183
Total cows	500	807	148	1455
Cows per farm (av.)	9.4	7.6	6.2	8.0
Portsmouth				
No. of members	13	49	14	76
Total cows	207	581	124	912
Cows per farm (av.)	15.9	11.8	8.9	12.0
Columbus				
No. of members	73	58	46	177
Total cows	1155	717	559	2431
Cows per farm (av.)	15.8	12.4	12.2	13.7
Four Markets				
No. of members	213	325	114	652
Total cows	2833	3178	1057	7068
Cows per farm (av.)	13.3	9.8	9.3	10.8

The difference in number of cows per farm in the different markets is significant for the effect this has on operating an association, due to the difference in the viewpoints of large and small dairymen.

Only 22 members, or 3.4 per cent of the 652, had become members within the year just prior to the study and 48, or 7.4 per cent, had been members for over 15 years. All of these 48 members were in the Akron market, as this was the only market in the study which had an association over 15 years old.

The length of time the members have belonged to their association is given by 5-year groups in Table 6.

TABLE 6.—Number of Members* and Length of Time They Have Been a Member of Their Association, by Market and Group

Market and group	Length of time of membership				
	Less than 1 year	1-5 years	6-10 years	11-15 years	Over 15 years
Akron	9	56	78	25	48
Dayton	9	47	41	81	.....
Portsmouth	3	46	9	19	.....
Columbus	1	62	19	94	.....
Four Markets					
Group I	5	54	42	91	20
Group II	12	113	79	100	20
Group III	5	44	26	28	8
Total	22	211	147	219	48

*Of the 652 producers interviewed in the four markets, five were not members at that time. The total in this table is therefore 647.

It would appear from this table that membership in associations had increased materially in the last 5 years. This trend has not been nearly so marked as the number of members who have belonged less than 5 years would indicate, for of the 233 members who had been members less than 5 years 82 had merely transferred from one association to some new association just starting in the same market. There had been some new members within the last 5 years, but markets had expanded very little during this period and little attempt was made to bring in new producers as members. In all of the markets with the exception of Akron, over half of the present association members had joined their association some time during the first 5 years of its existence. As indicated by the members interviewed in this study, there has been an unusually low turnover of members in the associations of these four markets.

The length of time members have been selling whole milk is shown in Table 7. The average for all members was 13.5 years.

The average length of time members had been selling milk varied from 12.4 years for Portsmouth to 16.5 years for the Columbus market. Factors affecting this are (a) attractiveness of returns from sale of whole milk as compared to returns from other farm enterprises in the area and (b) how rapidly the market has been expanding and bringing in new fluid milk producers.

There were 274, or 42 per cent, of the milk marketing association members interviewed who belonged to some other farm organization. Sixty-three per cent of the members in Group I, 34 per cent of Group II, and 26 per cent of Group III held membership in some other organization. Fifty-eight members, or about 10 per cent, belonged to two or more organizations in addition to their dairy marketing association. In addition to these 58 members, 130 belonged to the Farm Bureau only, 79 to the Grange only, and seven to some other single organization.

TABLE 7.—Average Number of Years the Producers of Four Ohio Markets Have Been Selling Whole Milk

Market	Group			Average for all members
	I	II	III	
Akron.....	16.3	12.8	12.3	14.0
Dayton.....	13.6	11.8	10.4	12.1
Portsmouth.....	12.4	10.6	10.4	10.9
Columbus.....	16.5	15.3	14.5	15.6
Total.....	15.4	12.5	12.5	13.5

TABLE 8.—Number and Per Cent of Members Belonging to Farm Organizations Other Than Dairy Marketing Cooperatives and Organization to Which They Belong, by Market and Group

Market	Organization					Total interviews	Per cent belonging
	Farm Bureau only	Grange only	Other	Two or more	Total		
Akron.....	54	9	6	20	89	216	41
Dayton.....	28	14	1	17	60	183	33
Portsmouth.....	15	15	.....	8	38	76	50
Columbus.....	33	41	.....	13	87	177	49
Four Markets							
Group I.....	64	31	4	36	135	213	63
Group II.....	55	31	3	21	110	325	34
Group III.....	11	17	.....	1	29	114	26
Total.....	130	79	7	58	274	652	42

ASSOCIATIONS IN THE FOUR MARKETS

AKRON

The Milk Producers' Association of Summit County and Vicinity.—This is one of the oldest milk marketing cooperatives in Ohio. Organized in January, 1917, it has been in continual operation ever since and was incorporated in 1933. There had been no previous attempts at organization in the market, but the Wayne-Medina Milk Producers Association was organized just shortly after 1917 on the western edge of the Akron area, selling into the Akron market. This organization became an auxiliary of the Milk Producers' Association of Summit County and Vicinity in 1919 and part of the organization in 1933.

Dissatisfaction due to lack of a uniform method of buying and paying for milk and the constant danger of the producer losing his market were the underlying reasons for the producers organizing. The preamble to the constitution and by-laws states in general terms the purpose of the organization to be "... to promote the dairy interest and encourage the sanitary and economic production of milk, and ... to market the same in a more judicious manner"

Each member signs a contract with the association and is given a certificate of membership. A 10-year contract is now in use. A yearly membership fee of \$1 is charged.

The most important services performed by the association are those of bargaining for the sale of its members' milk and contracting with the hauler for hauling the milk. Equipment for testing is kept at the Association office

and some small number of individual tests are run for the producers who send in samples, but the association has no control over sampling and testing in the Akron market.

Membership grew gradually from the start of the Association until in 1931 there were 3125 members. Membership from 1921 to 1935 by years was as follows:

Year	Members	Year	Members
1921.....	742	1929.....	2,952
1922.....	943	1930.....	3,125
1923.....	874	1931.....	3,093
1924.....	1,393	1932.....	2,960
1925.....	1,796	1933.....	2,832
1926.....	2,076	1934.....	2,714
1927.....	2,233	1935.....	2,741
1928.....	2,536		

This membership in the earlier years represented those who paid the dollar membership. Since not all shippers who sold through the association paid their membership fee, the number from 1921 to 1925 was somewhat higher than shown here. About 98 per cent of the market milk supply was sold through the Association in 1923. In 1933 this had fallen to about 60 per cent, but in 1934 and 1935 was about 90 per cent of the market total.

Money to run the association has been provided in two ways: A yearly membership fee of one dollar is charged, one-half of this going back to the local units for their expenses. In addition to this, the association makes a deduction of one cent per hundred pounds of milk from the members' checks. This is the maximum deduction provided for.

The first complete pool operated by the association was in 1923. The market pool plan was used up to January 1, 1932, at which time the base and surplus plan was put into effect.

The association is a member of both the Ohio Milk Producers Federation and the National Cooperative Milk Producers Federation. It also contributes to the Akron unit of the National Dairy Council. Legislative activities of this association and most other associations in Ohio are carried on through the State Federation just mentioned.

The Independent Milk Producers Association (Akron area).—This association was formed in January, 1932, but is not incorporated. This association was organized mainly due to dissatisfaction with low prices which accompanied the depression. Bargaining for the sale of members' milk is the only function performed by the association. It uses the same base and surplus plan as the other association.

The association has contracts with its members and with the dealers to whom it sells. The financing is done by a 1 per cent deduction from the members' milk checks.

DAYTON

Early organizations.—A loose organization of milk producers had operated in the Dayton market for about 3 years starting in 1912. It had no office, no contracts, and only about 250 members. This organization broke up due to unstable leadership and due to effective attempts by the dealers to break it up.

The Miami Valley Cooperative Milk Producers Association.—However, producers were dissatisfied with the wide variation in price, sampling and testing, and methods of buying milk; these conditions led to the organizing of The

Miami Valley Cooperative Milk Producers Association in 1921. The association was incorporated in September, 1921. The purpose clause of the articles of incorporation is all inclusive in the statement of services which may be performed for the members.

In Dayton, the association has been mainly a bargaining association but also owns and operates a butter plant. This churning plant handles sour cream both for members and non-members and also separates and churns some surplus milk when no other outlet is available. In addition to these operations the association has milk distributing plants at Troy and Greenville in two adjacent counties. The association also does the sampling and testing, pays the producer, provides field service, handles supplies, controls the hauling, and publishes a house organ.

A continuous contract, with cancellation dates, between the association and producer is used. This contract carries a liquidated damage clause and provides an initial \$3 membership fee. The member is given a copy of the contract which serves as his certificate of membership.

Membership in this organization has fluctuated widely, sometimes numbering over 80 per cent of the producers supplying the market and at other times only slightly over 50 per cent. The association has rendered the same service for non-members as for members where both were selling to dealers cooperating with the association. The same deductions are also made for operating the association from both members and non-members. For this reason a large membership has not been stressed but rather effort has been made to increase the number of cooperating dealers; this to a degree serves the same purpose under such a setup. An accurate record of membership by years is not available. In April, 1932, there were about 1400 members and, in 1935, 1239 members of the association selling milk into the Dayton market. The volume of milk handled by the association has varied from about 65 per cent to 80 per cent of the total market supply.

There are eight members of the board of directors. During the life of the association 21 men have served in this capacity.

The association is financed by a 4 cent per hundred deduction on milk and the \$3 life membership fee. In addition to these deductions, common stock and certificates of indebtedness are issued to finance the milk plant and creamery operations. This stock is paid for by capital deductions of 2½ per cent on the gross value of their milk. Non-member patrons pay only the deduction of 4 cents per hundredweight.

This association contributes one cent per hundred pounds of milk to the Dairy Council in Dayton. It is a member of both the Ohio Milk Producers Federation and the National Cooperative Milk Producers Federation.

The important moves made by the association can be summed up in the following five services: (a) Distribution of milk in two small markets, (b) building and operation of a creamery, (c) assuming control of the sampling and testing of milk, (d) the extensive control and supervision of hauling, and (e) the inauguration and operation of a basic surplus plan. Each one of these has been attended by the usual difficulties which could be expected.

The Buckeye Independent Dairy Farmers' Association.—This association was organized in 1934 and incorporated in October, 1934. Its members are mostly those producers who were not already association members. No contract is signed by the members. The signing of a membership application constitutes membership if the applicant is accepted by the board of directors. Membership may be cancelled by the members at any time without advance

notice. The board of directors has the power to cancel membership which must be ratified at the next membership meeting by a majority vote. The annual fee is \$1.

The services performed by the association are those of testing the milk and bargaining for its sale. Its operation is financed by a 4 cent per hundred deduction and the annual membership fee of \$1. The articles of incorporation authorize 1000 shares of common stock of par value of \$5. This stock is not intended for financing purposes but to "help control the votes of the membership ..." and is to be issued only when necessary.

The active membership of the association was about 250 in 1935 and it was servicing about twice this number of producers. It handles about 20 per cent of the market's supply of milk.

PORTSMOUTH

The Scioto County Cooperative Milk Producers' Association.—This association was incorporated in 1924. The membership fee was \$2.50 and 88 producers joined the association. A 2 per cent deduction was authorized for operation but this was never made. The association was conducted as a very loose organization and had no money on which to operate during its early history. It practically broke up in 1926, but the charter was never cancelled. Again during 1927 and 1928 the producers were brought together but no deductions were made by the association. They started a distribution plant but not on a cooperative basis. This was sold in 1928.

In 1929 the producers again decided to go ahead and function as an active cooperative association. This time they decided to make the deductions and open up an office with a secretary and manager as soon as they could organize. The by-laws were amended and the authorized deduction increased to 4 per cent. Reorganization was accomplished and a manager hired in August, 1930. Dissatisfaction with prices and domination of the market by dealers were the main reasons for organizing in this market.

This is a bargaining association. In addition to selling the members' milk it tests the milk, controls the hauling, and provides some field service. Membership is represented by contract between the association and member. The contract is for 12 months with a 30-day withdrawal notice clause. Membership of the association after its reorganization was as follows:

Date	Members	Date	Members
February, 1931	225	January, 1934	254
January, 1932	281	January, 1935	243
January, 1933	276		

Beginning about July, 1931, the membership has been 100 per cent of the total number of producers selling into the Portsmouth market. The contract between the association and dealers is a full-supply contract for one year with a continuing clause and a 60-day withdrawal notice. The organization handles 100 per cent of the milk being sold by producers to the distributors of this market. The year of highest milk receipts for the association was 1932, when it sold over 13 million pounds of milk. For 1935 the amount had fallen to slightly over 11 million pounds.

The association has been financed by a 2 per cent deduction and a \$2.50 membership fee. No stock or certificates have ever been issued.

The association is a member of the Ohio Milk Producers Federation, but this market has not been considered large enough to support a Dairy Council unit and therefore no deductions are made for this purpose.

COLUMBUS

The Scioto Valley Cooperative Milk Producers' Association.—Two organization attempts were made in the Columbus market in the decade previous to the organization of the Scioto Valley Cooperative Milk Producers Association. The Central Ohio Milk Producers Association was formed in 1916 and went out of business in 1921. This association bought a distributing plant in East Columbus, but due to poor management and insufficient finances the plant was disposed of in 1921 and the association passed out of existence. In 1918 a group of producers formed a cooperative enterprise for milk distribution. The name of this organization was "Home Producers Milk Company". The business was later taken over by private interests and the company is still doing business under the same name. Neither of these two associations had any relation to the one which succeeded them in 1923. However, many members of these old associations became members of the Scioto Valley Cooperative Milk Producers Association which was given its start by the Dairy Department of the Ohio Farm Bureau Federation.

After the break in milk prices which occurred during 1920 and 1921 there was a general dissatisfaction with prices and it was believed that by organization these prices could be moved back up to approximately what they were before. There was also a considerable amount of dissatisfaction with testing, which producers and organizers believed could be improved by association control. The purpose of organizing as set forth in the articles of incorporation was as follows: "The class of service to be performed for its members by this association shall be the collecting, processing, preparing for marketing, handling and marketing of milk and all dairy products and by-products and the doing of all things necessary or incident thereto." Thus far the association has operated as a bargaining association and has done the members' testing and a few other minor functions.

Membership in the association is represented by a membership contract—the member holding a duplicate copy. A large proportion of the members supplying the fluid market are on a three-way contract, the association, the dealer, and the member being the parties to it. It may be cancelled by any one of the three by a 30-day notice prior to April first of each year. The membership contract alone was used until 1925, when the use of the three-way contract was begun.

The membership in the association, including four cream units, was 4200 in 1932. Since that date one cream unit with about 1100 members has incorporated as a separate association and these producers are no longer members of the Scioto Valley Cooperative Milk Producers' Association. A new bargaining association and a small distributing association caused a loss in membership in the last 2 or 3 years.

There have been 22 different men who have served on the board of directors, which consists of seven members.

There was an original charge of \$3 for membership in the association but this is no longer made. The original members' contract provided for a maximum deduction of 2 per cent of the value of the product. The new three-way contract sets the maximum at 3 cents per hundredweight. The association actually collects 2 cents for its operation.

The association holds membership in both the State and National Federations of Producers Associations. The local Dairy Council until recently was partly financed from deductions made by the association. At present, this is financed by the dealers and a like amount is deducted directly from the producers for the operation of the Milk Control Board of the Columbus market, which functioned under, and was retained after the expiration of, the State milk marketing law.

The Columbus Milk Producers' Association.—The Columbus Milk Producers' Association was organized in 1933. Low prices accompanying the depression with the resulting dissatisfaction of many members of the existing association motivated the starting of the association. The activities have been limited to those of bargaining for the sale and sampling and testing of the members' milk.

The members are under contract with their association. Either party can cancel the contract by 30 days' notice prior to April 1 of each year. As yet no memberships have been cancelled by the association. By 1935 membership had reached almost 800. In this year the association sold between 35 and 40 million pounds of milk for its members.

Financing is done by a deduction of 2 cents per hundredweight from the members' milk which is the maximum provided for in the contract. The 2-cent deduction for operating the Milk Control Board is also made from the members of this association, the deduction being paid directly from the dealers to the Board.

The base and surplus plan has been used during the full life of the association. Base rules in this market are at present written into the market agreement and administered by the Control Board. The association is a member of the Ohio Milk Producers Federation.

The Dairy Farmers Distributing Company.—This association was started in 1932 as a distribution cooperative. It functioned until early in 1936, at which time the business was taken over by a private corporation already distributing milk in the Columbus market. A new plant was started and difficulty was experienced in finding a retail market for all the milk of the members. This, plus high overhead costs per unit, made it difficult for the association to return to the members a satisfactory price for their milk. It has been another case of expecting too much and making insufficient study before the venture was started.

ANALYSIS OF SERVICES PERFORMED BY THE ASSOCIATIONS

No two associations in Ohio are operated exactly alike due both to market conditions and the fact that no two boards of directors have exactly the same opinions of how an association should function. No two markets have the same type of producers or the same production conditions. The length of time milk has been sold for fluid purposes and the length of time associations have been operating in the market are factors affecting the thinking and action of producers.

Some markets have an unlimited area from which milk might easily be obtained while other markets have a restricted production shed. Also, much variation exists in the distribution conditions for different markets; the percentage of milk distributed by producer-distributors varies widely among markets and has a decided influence on the policies of associations.

These variations among markets and associations must not be overlooked when making comparisons of either specific or general practices of associations. It should be understood, therefore, that while the producers' opinions are analyzed and tabulated in the same manner for each of the four markets the meaning may be slightly different due to the variations mentioned. In each of the four markets, with the exception of Portsmouth, surplus milk and milk available within a reasonable hauling distance have made it imperative to have some sort of production control plans. The production conditions surrounding the Portsmouth milk shed help to restrict the shed and the major production problem there is one of seasonal variation control.

MARKETING PLANS

There are many types of plans of selling the producers' milk to the dealer. The method used most frequently in the earlier history of associations was merely to arrive at the price per hundredweight which the dealer was to pay the producer. In many cases before associations were formed the milk was sold for so much per hundredweight or per gallon without regard to its butterfat test. This proved bad because it placed a premium on dishonesty. The producer who could deliver the most milk, regardless of test, was the one who came out ahead. Watering of milk became a common practice as a result. In practically every market the advent of an association put an end to this method of selling.

From the start of associations until about 1925 the flat price plan was used almost exclusively in Ohio. Under this plan the milk was sold on butterfat test and all producers were paid the same per hundredweight for milk testing the same, regardless of the amount delivered.

Production of milk for the fluid market, due to the price advantage of marketing milk in this way, increased rapidly from about 1915. Milk production during the spring and summer months was controlled in no way and caused burdensome supplies at this time of year. At the same time shortages of milk were occurring in the fall months. The base and surplus plan was devised as a means to overcome at least part of this seasonal variation. All four markets included in this study were using this plan at the time this study was made. A description of the marketing plans as used in each of these markets is given in the following paragraphs.

AKRON

Prior to 1932 the market pool plan was used in the Akron market; on January 1, 1932, the base and surplus plan was started. The same base and surplus plan is used by both associations in the Akron market. A fixed base has been used and any increase or decrease in sales of base classes reflects in bases by a horizontal raising or lowering of all bases. The equalization fund method of equalizing cost of milk to dealers is also used in this market.

A base adjustment committee of five members selected by the board of directors of the Milk Producers' Association of Summit County and Vicinity rules on base adjustment applications of its members. There are no set "base rules" used by the association. Any question on transferring base and such questions as might arise under "base rules" are handled by the sales committee.

Surplus milk of the Milk Producers' Association of Summit County and Vicinity is handled partly by the dealers, but the condensery at Orrville has a contract to take whatever surplus the association wishes to divert to them in the surplus months. The producer is allowed to dispose of his surplus in any way he sees fit as long as it does not come into competition with milk for fluid or cream uses. This provision allows the producer to sell surplus to a cheese factory if he wishes.

The full-supply contract which has been used for years in the Akron market has made it possible for the size of the milk shed to be controlled. New producers could not get into the market without becoming association members or by distributing their own milk or selling to some dealer buying independently. As stated before, the market supply was expanded in 1928-1929 and this has been a serious problem since the depression. The base adjustment committee passes on applications by new producers and determines their base if they are taken into the market.

The only difference in the marketing plan during State control was the use of the Milk Commission for arbitration in place of the usual committee selected by the sales committee and the dealers.

DAYTON

In this market the base and surplus plan has been used now for 5 years. It had been used once before for a period of 3 years but discontinued on March 31, 1928. Bases have been set yearly on production performance of the shortage months of the preceding year. (Bases were raised or lowered horizontally to adjust to the needs of the market.) Just recently this has been made a little less flexible by setting up a schedule of percentage increases or decreases in production in base months which will determine if the producer's base is to be changed and if so to what extent. This change is to get away from a new base for each producer each year. Prior to the middle of 1935 a surplus pool was operated with the base and surplus plan instead of a base pool. Under this plan the base price was stated and the surplus price fluctuated to take care of changes in usage.

The Buckeye Independent Dairy Farmers' Association was unfavorable to the base and surplus plan of selling milk.

Under State control and since expiration of the Ohio control law, for all producers serviced by the Miami Valley Cooperative Milk Producers Association, the base adjustment committee controls base adjustments and base rules. The base adjustment committee consists of five men appointed by the sales committee and approved by the board of directors. A definite set of base rules is used. This committee also passes on new producers who wish to get into the market and determines what base they shall be given if they are allowed in.

The Miami Valley Milk Producers Association has contracts with the dealers which call for the purchase of milk through the association and the association guarantees Class I requirements. The dealers are not bound to purchase 100 per cent of their milk through the association. Non-members who sell through the association are serviced the same as members and the same deductions are made by the association for these services. The market pool and equalization payments are figured by the association. The auditing of dealers' records is under the control of the association and the expense is borne by deductions from the producers.

Surplus milk is handled mostly by the dealers in the market. Any excessive amount of surplus milk is taken care of by the association by churning. The producer has been urged not to send in excessive amounts of surplus but to separate and sell the cream to the association, for which he is given credit in setting his base.

PORTSMOUTH

The base and surplus plan was first introduced into the Portsmouth market in February, 1931. The four low months of receipts by dealers for a year determine the total base for the next year. Provision is included for horizontal adjustment of all bases up or down to correlate to market use. A market pool and equalization fund are used to equalize price to the distributors. These provisions were all used during State control and have been continued since the discontinuance of control.

Base rules and base adjustments were both made by the control committee under the market agreement in force from February, 1934, to July 1, 1935. A complete set of base rules was set up (by the committee) and is still in use. The board of directors of the association now administers the base rules and makes individual adjustments of bases.

The contract signed by the producer is with the association only and by it the producer agrees to sell all milk and cream through the association except that portion to be used at home for any purpose. The buyers' contract with the association is a full-supply contract and can be cancelled by either party by 60 days' written notice. The association figures the pool and determines the equalization payments.

The only difference in the marketing plan during State control and the periods before and after was the arbitration setup. Under State control the Milk Commission was used for arbitration. Before and since this an arbitration committee selected by the association and dealers was to handle price disputes which could not be settled otherwise.

Surplus milk is handled entirely by the regular distributing plants. Surplus milk has not been so much of a problem in this market due to the restricted nature of the milk shed. By close cooperation between the association and Board of Health the milk shed has been very definitely controlled. No new producers have made application for inspection for over 2 years.

COLUMBUS

The base and surplus plan has been in use in the Columbus market since April, 1925. It was voluntary with the producer until August, 1928. During this 3-year period the producer was free to decide among three plans: First, he might sell on a flat price basis and be free to produce and sell milk without regard to evenness of amount throughout the year. In this case the price was considerably below the base price; second, he might set his own base at the amount he expected to be able to ship per month (if he shipped more than this he took surplus price and if he shipped less he was penalized for "under-production"); third, he might allow his base to be set according to his production during the stipulated base setting months. In this event he took surplus price for the amount sold over his base but had no penalty for "under-production".

In August, 1929, all producers were put on base but still had the option of the two above-mentioned types. In 1932, the plan under which the producer set his own base and had "under-base" penalties was discontinued. The market pool was not used with the base and surplus plan until November, 1933.

The base setting period used in the Columbus market is the 4 months of the preceding year in which receipts of milk by distributors were lowest. Bases are set yearly and adjustments are made by a committee consisting of five members selected from the two bargaining organizations in the market. Base rules are embodied in the market agreement and are administered by the control board of the market. Prior to State control base rules were not in writing but questions involving matters of this nature were ruled on by the board of directors of the association.

Three-way contracts have been used almost exclusively in the Columbus market. The associations have not had full-supply contracts with the dealers. The terms of the base and surplus plans are stipulated in the contract among the three parties. The contract also provides for an arbitration committee and auditing of dealers' books to determine base necessities. This auditing is done by the local control board (which has been continued since expiration of State control, July 1, 1935) and the expense is borne by dealers and producers alike. These same provisions were used during State control, except that the State Milk Commission acted as arbitrator in case of price disputes.

By the terms of the contract the producer must deliver his total production of milk to the distributor, except what he may wish to use on his farm. Before State control each dealer handled his own surplus. Attempt was made to supply each dealer with as many producers as he could take care of without too much of a surplus burden. Under State control a market pool was used with an equalization fund to equalize the cost of milk to dealers according to their use of such milk. Since expiration of State control almost the same provisions as embodied in the market agreement during State control have been used.

The base adjustment committee sets the base for new producers when they are admitted to the market. There has been practically no expansion of the milk shed during recent years. This committee decides whether or not the market needs more milk or whether or not it is advisable to admit a new producer to the market, and, if it is decided to be advisable, the committee allots him a base which in its judgment is just.

MEASURABLE RESULTS OF MARKETING PLANS

The total deliveries of milk to the Akron market fell off sharply during the first year of operation under the base and surplus plan. Records are not available as to what the actual effect on production was; evidently some effect was exerted, however, as the production for the fall months decreased very materially from the previous year, showing that the lowered deliveries were not due merely to diverting surplus milk to other channels during flush production months. As shown in Table 9 this trend toward lower deliveries continued. No doubt, the influence of having a fixed base which is adjusted to the market needs shows to the producer more clearly the folly of producing a large amount of surplus.

Records of total receipts by years were available only in the Akron and Portsmouth markets for any considerable period of years. The data for the Portsmouth market were available from the time of the inauguration of the base and surplus plan only.

The effect of base and surplus plans on seasonality of deliveries can be ascertained with some degree of accuracy by comparing the variation of deliveries from the low to the high month of each year, both before and after

the plans were put into use. This comparison can be made directly with available records only in the Akron market. The average seasonal variation from the lowest to the highest month for the 7 years previous to the use of the base and surplus plan was 56 per cent. For the first 4 years during the use of the plan the average was 43 per cent. In the Portsmouth market the average variation for the first 5 years under their base and surplus marketing plan was 38 per cent.

TABLE 9.—Total Association Milk Receipts and Average Receipts per Member per Year and Seasonal Variation in the Akron and Portsmouth Markets

Year	Akron			Portsmouth		
	Total deliveries	Deliveries per member	Seasonal variation	Total deliveries	Deliveries per member	Seasonal variation
	<i>Lb.</i>	<i>Lb.</i>	<i>Pct.</i>	<i>Lb.</i>	<i>Lb.</i>	<i>Pct.</i>
1925.....	100,281,768	55,836	49	.....	.....	.....
1926.....	115,203,156	55,493	62	.....	.....	.....
1927.....	119,489,640	53,511	52	.....	.....	.....
1928.....	127,427,599	50,247	52	.....	.....	.....
1929.....	131,895,099	44,680	63	.....	.....	.....
1930.....	145,273,911	46,490	55	.....	.....	.....
1931.....	148,140,185	47,895	60	12,006,925*	53,364	42
1932.....	107,646,688	36,367	41	13,293,363	47,307	31
1933.....	95,206,384	33,618	35	12,565,213	45,526	36
1934.....	94,650,615	34,875	46	11,618,105	45,741	44
1935.....	92,999,571	33,933	49	11,391,291	46,879	35

*11 months.

These data would indicate some effect of evening out seasonal variation by the use of the base and surplus plan. In these two markets it appears that the total production may have been affected by cutting down the individual producer's sales. There is the inclination to attach too much importance to figures of total deliveries and forget how the individual reacted. The total number of producers delivering in the market may have a material effect on total deliveries.

The data available relative to base deliveries and fluid sales are not complete enough to draw any conclusions as to the effect of the marketing plans on matching the two. However, in all but the Columbus market the total base is determined by total fluid uses. These adjustments are made often enough so that the relation between the two amounts is held nearly constant.

Akron was the only market which had figures available to show the relation of surplus receipts to total market receipts for a number of years before use of a base and surplus plan and during several years of its use. By surplus receipts is meant that amount above requirements for fluid milk and cream.

TABLE 10.—Per Cent of Total Receipts Which Surplus Receipts Represent in the Akron Market, 1925-1935

Year	Per cent	Year	Per cent
1925.....	16	1931.....	41
1926.....	24	1932.....	30
1927.....	22	1933.....	32
1928.....	24	1934.....	34
1929.....	22	1935.....	27
1930.....	34		

The base and surplus plan was started in this market in 1932. During the 7 years prior to this, when the association pool was operated, the average surplus was 26 per cent. Increased production and a decided fall in use of milk and cream starting in 1930 made the surplus problem a vital one in this market. By 1933 the sales of milk for fluid consumption had fallen about 37 per cent. If market receipts had been the same in 1933 as in 1931, the surplus would have been about 56 per cent of the total receipts. For the first 3 years of operation of the base and surplus plan surplus receipts averaged 32 per cent of the total receipts. Surplus receipts were decreased from about 61 million pounds in 1931 to about 32 million pounds in 1932.

In the Dayton market surplus amounted to about 36 per cent of total receipts for the years 1932 to 1934. The surplus in the Portsmouth market during the years 1931 to 1934 averaged 36.5 per cent of total receipts.

To measure the effect of any type of marketing plan or any other factor on prices it would be necessary for the data to cover the same periods of two complete price cycles. In Tables 11 and 12 are presented three series of prices:

TABLE 11.—Class I Price per Hundredweight and Average Gross Price per Hundredweight to Producer for Milk in Four Ohio Markets, 1923-1935

Year	Price in dollars per hundred*							
	Akron		Dayton		Portsmouth		Columbus	
	Class I	Av. to producers	Class I	Av. to producers	Class I	Av. to producers	Class I	Av. to producers
1923.....	3.41	.....	.....	.....	.....	.....	.....	.....
1924.....	3.36	.....	.....	.....	.....	.....	.....	.....
1925.....	3.31	2.84	.....	.....	.....	.....	2.77	2.61
1926.....	3.36	2.81	2.51	.....	.....	.....	2.83	2.69
1927.....	3.35	2.84	2.53	.....	.....	.....	3.06	2.90
1928.....	3.33	2.80	2.60	2.62	.....	.....	2.98	2.83
1929.....	3.40	2.85	†	2.58	.....	.....	3.11	2.98
1930.....	3.25	2.45	†	2.29	.....	.....	2.82	2.65
1931.....	2.32	1.68	1.90	1.66	2.82	2.12	2.13	2.01
1932.....	1.56	1.30	1.57	1.35	2.34	1.65	1.50	1.49‡
1933.....	1.64	1.40	1.37	1.26	2.05	1.53	1.55	1.47‡
1934.....	2.06	1.80	1.83	1.56	2.21	1.79	1.98	1.79
1935.....	2.22	1.84	1.97	1.70	2.35	2.03	2.11	1.87

*Base test for Columbus, Dayton, and Portsmouth is 4 per cent and for Akron is 3.5 per cent. Prices in this table represent price for milk of base test.

†Only flat price quoted during these 2 years of pooling operations without base and surplus plans.

‡Exact figures not available. These are estimates based on base and surplus prices.

TABLE 12.—Retail Price per Quart of Milk in Four Ohio Markets, 1923-1935

Year	Price in cents per quart			
	Akron	Dayton	Portsmouth	Columbus
1923.....	0.130	.....	.....	.....
1924.....	0.126	.....	.....	.....
1925.....	0.123	.....	.....	0.112
1926.....	0.125	0.115	.....	0.116
1927.....	0.128	0.120	.....	0.120
1928.....	0.127	0.120	.....	0.112
1929.....	0.130	0.123	.....	0.120
1930.....	0.123	0.118	.....	0.120
1931.....	0.102	0.100	0.129	0.100
1932.....	0.088	0.092	0.111	0.088
1933.....	0.088	0.082	0.108	0.083
1934.....	0.105	0.093	0.110	0.095
1935.....	0.105	0.098	0.110	0.100

(a) Class I price, (b) average gross price, and (c) retail quart price to farmer on a yearly basis. No attempt will be made to measure effect of the marketing plans on price, as complete cycles of price are not represented by these data.

Usually some relation exists between price and the inaugurating of base and surplus plans. This type of marketing plan has usually been brought into use to correct part of the fault of falling prices; i. e., surplus. This was definitely the case in the Akron and Dayton markets. Whether or not the ultimate effect of these marketing plans will be to raise prices cannot be determined until more complete data become available.

It can well be concluded from the foregoing discussion on measurable results of the marketing plans that records are not available from which reliable conclusions may be drawn. If marketing plans are to be properly administered and some definite means to measure their success is desired, it will be absolutely necessary for some market agency to keep very complete market and individual producer records.

ATTITUDE OF MEMBERS TOWARD MARKETING PLAN USED IN THEIR MARKET

Any plan of marketing must be satisfactory to a majority of the producers if the plan is to succeed over any length of time. Regardless of the merit of the plan, it must be of such a nature that the producer can understand what the plan aims to do and how it will affect him. If the plan is too complicated or of such a nature that a reasonable amount of education will not show him the value and merit of it, then it has little chance of success. This section of the study deals with the attitude of the producers to the plan in use in their market. As the base and surplus plan was in use in all four markets this section on producers' attitudes refers entirely to base and surplus plans. Producers were not asked specifically what type of a selling plan they preferred if they were not favorable to the one in use. Types of producers, amount of education done, the type of plan in use, the length of time the plan has been in use, and the extent to which the producers are in the dairy business all go to determine the satisfaction or dissatisfaction of the producers with the plan.

In all four markets combined there were 334 producers definitely favorable to the base and surplus plan as operated in their respective markets and 241 definitely unfavorable. Sixty-six of the remaining 77 were not decided and 11 gave no opinion.

A wide variation in attitude toward the base and surplus plan existed among groups. The percentage of producers favorable in Group I was 74 per cent; in Group II, 43 per cent; and in Group III, 32 per cent.

The length of time a base and surplus plan has been in operation in a market apparently affects the attitude of producers to the plan. In the Columbus market where base and surplus plans have been used for over 10 years, 63 per cent of the producers was in favor of this plan of selling. In the Akron and Dayton markets, with about the same number of producers as Columbus but where the plans have been used only 4 and 5 years, respectively, there is much more dissatisfaction with base and surplus plans. However, the attitude in the Portsmouth market where this type of plan has been used only 5 years is favorable. This is probably due to the small membership which makes it possible to do a more personal job of education of the producer.

TABLE 13.—Attitude of Association Members of Four Ohio Milk Markets Toward the Base and Surplus Plan Used in Their Market, by Market and Group

Market and attitude	Group*			Total	
	I	II	III	No.	Pct.
	No.	No.	No.	No.	Pct.
Akron					
Favorable.....	50	36	9	95	44
Unfavorable.....	16	68	18	102	47
Doubtful.....	8	6	2	16	8
No answer.....	.....	2	1	3	1
Dayton					
Favorable.....	38	40	5	83	45
Unfavorable.....	11	52	15	78	43
Doubtful.....	4	14	4	22	12
No answer.....	.....	.....	.....	.....	.....
Portsmouth					
Favorable.....	12	27	5	44	58
Unfavorable.....	1	10	6	17	22
Doubtful.....	.....	10	3	13	17
No answer.....	.....	2	.....	2	3
Columbus					
Favorable.....	57	37	18	112	63
Unfavorable.....	12	12	20	44	25
Doubtful.....	2	8	5	15	9
No answer.....	2	1	3	6	3
Four Markets					
Favorable.....	157	140	37	334	51
Unfavorable.....	40	142	59	241	37
Doubtful.....	14	38	14	66	10
No answer.....	2	5	4	11	2
Total.....	213	325	114	652	100

*These three groups determined, arbitrarily, on general appearance of farm, appearance of dairy buildings, and the producers' apparent understanding of milk marketing. Complete explanation in introduction.

There was no significant relation between the length of time a producer had been selling whole milk and his attitude toward base and surplus plans. By dividing the members into four groups according to the length of time they had been selling whole milk, the percentage of members favorable was found to be almost the same for each group.

Evidently other factors are much more important in determining attitudes toward the marketing plans. Without the influence of some type of seasonal production control plan the producers make little effort to even out their production, and therefore marketing plans affect new and old producers about alike.

As indicated by this study and one made previously⁶, a very definite relation exists between the size of producers' herds and how they feel about the value of a base and surplus plan. Table 14 shows the producers' attitudes by size of herds.

The small producer claims it is more difficult for him to adjust his herd for an even seasonal production than it is for the larger producer. Any one failure in breeding program or any misfortune with individual animals will affect the small herd by a larger percentage than the large herd. For this reason the small producer is more liable to be dissatisfied with a plan which may penalize him heavily for uneven production. Quite often the small pro-

⁶Mimeograph Bulletin 76, Department of Rural Economics of the Ohio State University and Ohio Agricultural Experiment Station.

ducer is less interested in dairying than in some other phase of farming and does not care to go to the trouble of evening his production to the extent that the large producer can afford to.

TABLE 14.—Attitudes of Milk Producers of Four Ohio Markets Toward the Base and Surplus Plans as Used in Their Market, by Size of Herd

Market and attitude	Number of producers by size of herd					Total
	Less than 6 cows	6-10 cows	11-15 cows	16-20 cows	Over 20 cows	
Akron						
Favorable.....	6	45	33	5	6	95
Unfavorable.....	13	62	15	10	2	102
Doubtful.....	3	8	1	2	2	16
No opinion.....	.....	2	1	.....	.....	3
Total.....	22	117	50	17	10	216
Dayton						
Favorable.....	22	46	10	5	.....	83
Unfavorable.....	19	47	9	2	1	78
Doubtful.....	6	13	2	.....	1	22
No opinion.....	.....	.....	.....	.....	.....	.....
Total.....	47	106	21	7	2	183
Portsmouth						
Favorable.....	3	21	15	1	4	44
Unfavorable.....	2	13	1	.....	1	17
Doubtful.....	1	7	2	2	1	13
No opinion.....	.....	.....	1	1	.....	2
Total.....	6	41	19	4	6	76
Columbus						
Favorable.....	3	40	38	17	14	112
Unfavorable.....	3	15	14	6	6	44
Doubtful.....	1	7	4	1	2	15
No opinion.....	.....	2	3	1	.....	6
Total.....	7	64	59	25	22	177
Total of four markets						
Favorable.....	34	152	96	28	24	334
Unfavorable.....	37	137	39	18	10	241
Doubtful.....	11	35	9	5	6	66
No opinion.....	.....	4	5	2	.....	11
Total.....	82	328	149	53	40	652

Of those producers with herds of less than 11 cows, 45 per cent was satisfied with the base and surplus plan of selling. Sixty-one per cent of the owners of herds of 11 cows or more was satisfied. The group with the highest percentage of dissatisfied members was the one including producers with five cows or less.

Comments from the producers about changes in the base and surplus plan ranged from complete condemnation of this method of selling milk to some few constructive suggestions. Very few of those satisfied with the base and surplus plan have any suggestions for change. Those who are dissatisfied naturally want some change which usually would fit their respective cases. Many times these are unreasonable suggestions.

The most frequent suggestions for change were those dealing with adjustment of bases and base setting periods. Two things are mainly responsible for importance of base adjustment methods. Under most types of base and surplus plans there is a real penalty for the producer who attempts to expand.

This causes dissatisfaction and a desire for some method of adjustment to allow some expansion of production. The other reason for the importance of adjustment methods is the occurrence of misfortune or uneven production due to loss of cows or other influences of a similar nature. The desire for a shift of base period is due mainly to the inability of some producers to adjust their production so as to have a sufficient amount of milk during the base period to set a reasonable base.

A few producers thought bases should be inflexible so that, when once determined, the total bases would vary but little. Higher bases were suggested in several instances and probably reflect individual dissatisfaction. A few of these latter suggestions, however, were the thoughts of some that instead of cutting bases it would be more satisfactory to lower the base price. Some producers thought the base and surplus plan would be made much stronger if the association made definite arrangements to handle their surplus and not allow it to be used as a talking point to lower prices. The remainder of the suggestions in Table 15 are self-explanatory.

TABLE 15.—Changes or Additions Suggested by Producers for the Base and Surplus Plan as Used in Their Respective Markets and General Comments Relative to the Plans

	Market and number of producers				Total
	Akron	Dayton	Portsmouth	Columbus	
Comments relative to changes:					
Better method of base adjustment . . .	25	8	7	6	46
Different base period	1	20	1	16	38
Inflexible bases	3	3	1	1	8
Higher bases	15	12	1	1	29
Let producer set base	2	1	.....	2	5
Reallocate bases	5	.....	2	.....	7
Handle own surplus	2	4	1	7	14
Closer check on dealers to arrive at total base	9	3	1	1	14
Comments not relative to changes:					
No change desired	30	18	27	75	150
Prefer flat price	79	59	20	36	194
Miscellaneous	4	.....	.....	2	6
No remarks	47	57	15	52	171

No doubt some of the objections to the base and surplus plan of selling milk were voiced as part of a general dissatisfaction. Of the total 652 producers interviewed, 575 expressed themselves on their attitude to the marketing plan in use. Of these, only 40 who were favorable to the base and surplus plan were unfavorable to general conditions as they exist under cooperative marketing of their milk. Of the 170 producers who were not in accord with the policies of their association in general, 110, or 65 per cent, were also unfavorable to the base and surplus plan of selling. Of 431 who were definitely favorable to their association's work, 108, or 25 per cent, were not in favor of base and surplus plans. These figures indicate that there is a decided relationship between dissatisfaction with the cooperative association and dissatisfaction with marketing plans. In a large number of cases producers stated that their only dissatisfaction with their association was because of the use of the base and surplus plan.

SAMPLING AND TESTING

Taking samples of members' milk from which butterfat tests are made and the testing of these samples are controlled completely by the associations in some markets; in other markets the associations have no control. Neither do the associations of any two markets have exactly the same degree of control of these services. Where complete service of sampling and testing is performed by the association, the expense usually amounts to about one cent per hundred pounds of milk. In most instances the associations in Ohio embarked on a program of testing the milk or check-testing as one of the first functions to be performed. Sampling of the milk requires more confidence between the dealer and association and was not done by many associations until quite recently.

Before the advent of testing by producer representatives many unscrupulous dealers used fictitious tests as a means by which to procure milk at a lower price. A very general practice of "pencil testing" had also developed. By this is meant lowering tests when they were high and raising them somewhat when low in order to keep the producer satisfied and sometimes actually not testing but merely estimating butterfat tests. In some markets the producers were organized largely for the purpose of securing more fairness in testing and sampling. It has become one of the most important functions of associations.

In the Dayton market the associations have full control over sampling and testing of the producers' milk. The entire cost of this is borne by the associations. The Miami Valley Cooperative Milk Producers Association has facilities at its offices to do the testing. Six men are employed by this association to do the sampling and testing. Under this complete control the complaints on tests have fallen off to the place where only slightly over 100 are received per year from the members. The testing has been done by this association since 1922 and sampling since 1927.

The Scioto County Cooperative Milk Producers' Association does the testing in the Portsmouth market but the companies do the sampling. In case of objection to test by producers the association checks the samples and tests and the payment is made on this test. One man is employed part time on testing. The dealer bears none of the expense of testing. Complaints by producers average about 12 per month. The association has been doing the testing since September, 1932.

Sampling and testing for producers of the Akron market are done entirely by the dealers, the associations having no control. Producers have raised many objections to testing in the past but these have gradually decreased in number from 3173 in 1930 to 550 in 1934. The Milk Producers' Association of Summit County and Vicinity maintains testing equipment at its offices and producers may send in samples for the association to test. This service is used by some producers both for individual cow tests and also for a check on dealers' tests. In 1935 a vote was taken in the association to determine if the producers wished to have the association take over the sampling and testing. An additional assessment of one cent per hundred pounds of milk was to be made to finance this service. The members turned it down by a vote of approximately 5 to 3. The average cost per producer would have been about \$3.10 per year on the basis of 1935 production.

The producers' associations and the control board do the sampling and testing in the Columbus market. This is the same board described in the section dealing with the associations of the four markets. This board is now

financed by deductions from the producers. The entire cost of the sampling and testing therefore is borne by the producers. Testing is done at the dealers' plants where the samples are locked up after being taken. Producer objections to tests are comparatively few, the associations receiving less than 100 per year.

Cost of testing in the three markets included in this study where these functions are performed varies from less than one-fifth of a cent to one cent per hundredweight. The variation in type of service accounts for the difference. Where complete supervision of sampling and testing is in the hands of the association the cost is high. The amount of milk per producer also has a decided influence on cost per hundredweight. It costs as much to test the milk from a producer who sells 2000 pounds per month as from one who sells 10,000 pounds per month.

Market premiums for milk of high quality are very few in Ohio markets. Most producers strive to build up herds which will produce milk above the butterfat test on which the market price is based in order to get a price at least as high as the quoted market price. Since so much stress is placed upon production of high testing milk by the producers, they are particularly interested in seeing their milk tested properly. The average test of all milk in each of the four markets included in this study is appreciably higher than the base test for that market. At times the tests average as much as 0.7 per cent above the base test. This means the dealers are getting a large amount of surplus butterfat and can pay but little above the butterfat market as the differential for butterfat above the base test.

One way in which to measure the results of a program of sampling and testing by an association, with what records are available from associations, is to compare the satisfaction of producers as evidenced by the number of complaints concerning tests before and after the testing program was started by the association. The reduction in number of complaints was ascertained as accurately as possible from each association. In the Portsmouth market the complaints have been reduced to less than 150 per year and in the Columbus market there are less than 75 complaints per year now. Sampling was taken over by the association in the Dayton market in 1927 and since that the complaints have decreased until only 100 to 140 are received per year. In Akron where sampling and testing are not done complaints have decreased, but in 1934 there were 550 complaints. In addition to this, the members' attitude toward having their association perform these services is a good measure of the results of control by the association.

The attitude and opinions of the producers are not criteria by which to measure definitely the results of sampling and testing. However, it is necessary to know these things to determine whether or not the producers believe it is worth while. When asked what benefits were derived from their association 125 members reported more accurate testing as one of the outstanding accomplishments of the association. Of these 125 members, 120 were in the Columbus and Dayton markets. In the four markets there was a total of 50 producers who cited low butterfat tests as one of the unsatisfactory conditions existing in the market before the association was formed. All but seven of these were from the Dayton and Columbus markets.

The answers from members when asked specifically about the satisfaction of their present arrangement for sampling and testing are given in Table 16.

TABLE 16.—Comments of Members of Milk Producers Associations of Four Ohio Markets as to the Satisfaction of Butterfat Tests Made by Their Association Compared to Their Previous Test

Comments	Number of members				Total
	Akron*	Dayton	Portsmouth	Columbus	
More satisfactory		72	31	86	189
No more satisfactory		63	37	75	175
No way to compare		31	4	4	39
Miscellaneous		11	4	9	24
Total		177	76	174	427†

*Only check-testing on request done at Akron.

†This total is exclusive of Akron and nine producers who were either non-members or did not answer.

Of the total 427 members answering, 189, or 44 per cent, stated that testing was more satisfactory at present under association control. One hundred and seventy-five members, or 41 per cent, thought testing was no more satisfactory than before the association took it over. Some of these 175 were well satisfied with testing before the association assumed control and some were not satisfied under either arrangement. Nine of these 175 members said they were less satisfied with the association's testing than when done by the milk dealers. A total of 39 members said they were undecided because there was no way to compare definitely the effect of testing done by the association. In general, the producers are much better satisfied to have the association do their testing. They feel that having it done by their own representative assures them of accurate testing.

A definite relation exists between the attitude toward testing and the groups of shippers. The method of grouping the members has been explained before. In Table 17 these data are shown by markets.

TABLE 17.—Number of Members Reporting Testing More or No More Satisfactory Since Becoming a Member of Their Association, by Market and Group

Market	Group			Total
	I	II	III	
Akron				
More satisfactory	20	19	5	44
No more satisfactory	35	63	13	111
Dayton				
More satisfactory	36	28	8	72
No more satisfactory	9	47	7	63
Portsmouth				
More satisfactory	5	22	4	31
No more satisfactory	7	22	8	37
Columbus				
More satisfactory	43	29	14	86
No more satisfactory	23	26	26	75
Four Markets				
More satisfactory	104	98	31	233
No more satisfactory	74	158	54	286

In Group I 58 per cent of the members who expressed their opinion of the effect of the association on testing thought testing was more satisfactory. In Group II the percentage was 38 and in Group III it was 36. In the Columbus and Dayton markets this relationship is more pronounced than in the two other markets.

TRANSPORTATION

The problem of trucking rates and efficiency of routing has been of extreme importance during the depression and the accompanying low prices for milk. As prices for milk began to drop, the percentage of the producer's dollar going for trucking increased. This situation brought about much criticism of trucking rates, and, along with this, attention was drawn to the inefficiency of truck routes. Individual producers were able in some cases to get their rates lowered but this method of handling the trucking problem was not satisfactory because all producers were not treated alike. The associations were much better able to serve their members in making these adjustments than the individual members bargaining for themselves. Most associations consequently made attempts to improve hauling conditions for their members. These attempts were of varying degrees of control over rates and routing.

Hauling rates and conditions were mentioned by only eight members as one of the unsatisfactory conditions in the market before the association was formed. Five of these members were in the Dayton market. The relation existing between the price of milk and hauling rates just prior to the organization of most of the associations was such that hauling rates did not appear to be particularly burdensome.

Of the four markets included in this study almost complete supervision over trucking by associations is exercised in the Dayton, Portsmouth, and Akron markets. The Miami Valley Cooperative Milk Producers Association made a complete study of rates and routes during 1930 and 1931 and rerouted the entire market, taking complete control of the hauling operations. The number of routes was reduced from 54 to 37 and the average hauling rate reduced from 37.4 cents to 27 cents per hundredweight. This association now has complete control of transportation with the exception of owning the trucks. The haulers are hired by the association. In setting hauling rates the cost of operating the truck is used as the base, to which is added a fixed amount per day to pay the driver. A minimum charge of \$3 per month per shipper is made. This is important in the Dayton market due to the large number of small producers. No special type of truck is required in this market.

The Scioto County Cooperative Milk Producers' Association assumed control of hauling in the Portsmouth market in September, 1932. The market was completely rerouted and the number of routes reduced. In 1931 there were 17 routes but by the latter part of 1935 there were only nine. Rates had been reduced from 27.6 cents in 1931 to 16.6 cents in 1935. The haulers are hired by the association on competitive bids. In case no objection is raised by the producers or by the hauler on a particular route, the contract is allowed to continue from year to year. Deductions from producers' gross returns to pay the hauler are made by the dealers. The hauler owns his own trucks and must give bond to the association if he does not have sufficient property to justify waiver of bond.

The Milk Producers' Association of Summit County and Vicinity hires the haulers by bidding. The locals in 1930 started competitive bidding for trucking and routed the trucks. Up until that time nothing constructive had been

done by the association relative to trucking. At present the locals of the association nominate haulers from whom they wish their hauler to be selected. The association then hires the hauler and the hauling contract is with the association. This amounts in many cases to the locals merely naming the hauler already hired and signifying their willingness to continue his contract. A minimum can charge of \$2 per producer per month is assessed in case the regular charge is less than this. Routes have been consolidated by the association and the number reduced from 85 in 1930 to 61 in 1935. Haulers are paid by the dealers at the direction of the association. The Akron market requires insulated covered trucks with ice refrigeration. The hauling of milk not sold through this association is handled mostly by the dealers.

The associations in the Columbus market have little control over hauling. The Scioto Valley Cooperative Milk Producers' Association has contracts with a few of their truckers. Some of these contracts are let by bids and others are arrived at by meetings of the route committees and the hauler. The route committee is a committee of producers from the route who have been selected to represent all the producers on that route in dealing with hauling problems. A minimum can charge is made under these contracts, the minimum being a charge for 50 pounds per day. Some consolidating of routes has been done in a few sections. The dealers pay the haulers, and, in most cases, the hauler is responsible to the dealer. No special type of truck is required in this market except as may be stipulated by individual dealers.

TABLE 18.—Average Hauling Rates, Average Length of Routes, Number of Routes, and Average Weight of Load of Milk Hauled in Four Ohio Markets, 1930-1935

Market	Year	Av. rate per cwt.	Av. length of routes	No. of routes	Av. weight of loads
		<i>Ct.</i>	<i>Mi.</i>		<i>Lb.</i>
Akron.....	1930	26.0	.....	85	4682
	1931	26.0	.....	85	4775
	1932	21.0	.....	67	4390
	1933	18.4	.....	67	3893
	1934	18.0	.....	65	3990
	1935	20.3	60.0	61	4200
Dayton.....	1930	37.4	.....	54	2532
	1931	32.0	.....	44	3300
	1932	27.1	69.2	37	3178
	1933	26.2	64.1	37	2606
	1934	26.0	.....	37	.....
	1935	26.0	.....	37	.....
Portsmouth.....	1932	15.6	.....	10	3630
	1933	15.4	.....	10	3440
	1934	15.3	.....	11	3030
	1935	16.9	70.0	11	2830
Columbus.....	1934	21.0*	.....	.....	.....
	1935	21.0*	.....	102	.....

*Estimate based on average of one large dealer and estimates made by associations.

In Table 18 is given a comparison of rates, loads, and routes of the four markets in which this study was made. These figures are for the markets as a total, and in Table 19 are shown the hauling rates of the 652 producers interviewed in the four markets. Only estimates are available for the Columbus market as a whole as the associations have only a few routes under their control.

TABLE 19.—Average Hauling Rate, in Cents per Hundredweight, for Members Interviewed in Four Ohio Markets, 1935, by Distance from Market and Average Distance of all Groups from Market

Market	Distance from market						A.v. distance from market
	Less than 11 miles	11-15 miles	16-20 miles	21-25 miles	Over 25 miles	A.v. of all groups	
	<i>Ct.</i>	<i>Ct.</i>	<i>Ct.</i>	<i>Ct.</i>	<i>Ct.</i>	<i>Ct.</i>	<i>Mi.</i>
Akron.....	18.5	18.8	19.0	20.3	20.3	19.3	18.2
Dayton.....	22.6	24.1	28.9	28.0	24.8	26.0	16.9
Portsmouth.....	16.3	15.6	17.3	19.7	18.0	16.6	13.7
Columbus.....	19.5	19.8	20.3	20.5	20.4	20.2	18.7
Four Markets.....	19.1	20.3	22.5	22.9	21.0	21.5	17.4

The average hauling rate of members interviewed, grouped by their distance from the market, is shown in Table 19. Distance from market is evidently a factor of minor importance in determining rates. The average for those members living within 11 miles from the market is 19.1 cents per hundredweight and the rate for those living more than 25 miles out is 21.0 cents. Portsmouth, with 16.6 cents per hundredweight and an average distance of members from market of 13.7 miles, had the lowest rates. Dayton, with 26.0 cents per hundredweight and the members averaging 16.9 miles from market, was highest.

A very important factor contributing to determination of hauling rates is that of the average amount of milk shipped per day per producer. Exactly comparable figures are not available for all four markets, but average number of cows per farm of those producers interviewed is a fairly accurate measure of this. The average number of cows per farm of those farms visited for the Dayton market is 8.0; for the Akron market, 10.5; for Portsmouth, 12.0; and for Columbus, 13.7.

Sixty-three per cent of the producers interviewed was favorable to having their associations control the hauling, 30 per cent was unfavorable, and 7 per cent noncommittal. Not much variation exists between groups with respect to attitude toward control of hauling. Of the members classed as Group I, 67 per cent was favorable; of Group II, 62 per cent; and of Group III, 60 per cent.

In Table 20 is shown the attitude of members by market. This shows a big difference in attitude in the different markets. Very little difference was found at different distances from the market.

TABLE 20.—Members' Attitude Toward Their Association Controlling the Hauling for Its Members and Number of Members Expressing Each in Four Ohio Markets

Market	Attitude			Total
	Favorable	Unfavorable	No opinion	
Akron.....	152	44	20	216
Dayton.....	135	38	10	183
Portsmouth.....	35	34	7	76
Columbus.....	90	77	10	177
Total.....	412	193	47	652

Members in the Akron and Dayton markets were decidedly in favor of hauling control by their association; whereas in the other two markets the members were almost evenly divided on the question. In the Portsmouth market the hauling rates had been reduced decidedly before the association assumed control. The rates in the Columbus market had been lowered very materially with less than 20 routes under association control. By dividing the members of each market into three groups based on hauling rates, it was found that almost no relation existed between what rate the producer paid and his attitude toward association control of hauling. It appears that the most influential factor in determining the member's attitude is his experience with rates before association control and under such control.

Many members felt that hauling is a function which should be controlled by the local organization rather than by the central organization. The fact that the locals are not given full control in hiring the hauler in any of the markets may account for the reluctant attitude of some members toward association control. If more authority over hauling rates and routing were vested in the local, more members would probably be in favor of it. A very agreeable method is used by the Milk Producers' Association of Summit County and Vicinity, where the haulers are practically selected by the local and the central organization does the actual contracting with them.

The hauler is an important cog in the distribution system of milk in that he is in constant contact with the producers. He is the most influential field man and is used by both producers and dealers for many services in addition to the hauling of milk. The producers use him to bring supplies out from the market and as a source of information. He is closer to the producer than any other man in the system through which his milk is distributed. It was found in this study that the member generally wished to be fair to the hauler concerning rates. In some instances when rates had been lowered by the association to the point they felt the hauler was losing money, they voluntarily agreed to raise the rate. No doubt the close contact with the hauler had a considerable influence on the attitude of the association member toward association control of hauling. Some associations are contemplating making the haulers more responsible to the association and using them as field men because of their close contact with their members. Without proper supervision over the hauler, he may be a destructive agency to the association; whereas, with proper supervision he may be very valuable.

QUALITY IMPROVEMENT

Cooperative milk marketing associations in Ohio have not made quality improvement one of their major functions. Practically all of the work along this line done by these associations has been by cooperation with the Boards of Health in the markets. None of the associations in the four markets included in this study use field men specifically for this purpose. The Miami Valley Cooperative Milk Producers Association in the Dayton area is the only association in the four markets which uses a full time field man and his time is used only incidentally on quality. This quality work is done almost entirely upon member request and not as part of the regular field routine.

Nine members of the 652 interviewed in the four markets reported being visited during the past year by some association representative regarding their milk quality. During this time a total of 54 visits had been made to the farms of the 652 producers. One-sixth of the visits reported had to do with the improvement of quality of the member's milk.

In the Akron market the Board of Health has been active in quality improvement work and the associations have done no field work. The Milk Producers' Association of Summit County and Vicinity has upheld the Board of Health in its program by urging its producers to conform to the rulings of the board. This board has required covered insulated trucks with refrigeration and the association has taken this into consideration in trucking rates. In the Portsmouth market the association cooperates closely with the health board in its program and sends the members educational letters on quality production but does no field work along this line.

The associations of the Columbus market have done some little field work on quality, but most of this type of work has been done by letter and with the Board of Health. Some of the dealers in this market are very active in their quality work and their field work helps the producers materially. The house organ, "The Miami Valley Cooperative Dairyman", of the Miami Valley Cooperative Milk Producers Association is used for articles on quality production. Its testing department is also used for this work. In addition to this the associations cooperate with the Board of Health in its program and send circular letters to members regarding quality production.

There were 256 members of the total interviewed who gave their association credit for being of assistance in improving the quality of their milk; 323 members said it had been of no influence. Following are some of the comments of members relative to how their association has helped them to produce better milk:

- (1) Provided information as to Board of Health requirements.
- (2) Helped by keeping producers constantly in mind of health regulations and necessity for sanitation.
- (3) Impressed the fact on minds of producers that quality is necessary if good price is to be expected.
- (4) Helped by furnishing sanitary supplies cheap.
- (5) Urged action on part of the Board of Health.
- (6) Helped by giving advice through circular letters, etc.
- (7) Indirect help.

Members generally were in accord with most of the health work being carried on in the market. Some skepticism was voiced about some of the newer regulations, especially the contagious abortion tests. The main objections of the producers to the test arose from a belief that it was of doubtful accuracy. The members take most of the old established regulations for granted and very few voice objections to these. No doubt there is need for additional quality work to be carried on among the producers. The associations could be of valuable assistance to their members in this work. Service of this kind by the association would probably reach the producer very forcibly and also give the associations additional contacts with their members.

MEMBERSHIP RELATIONS, EDUCATION, AND CONTACT

As the deductions made by most of the cooperative milk marketing associations in Ohio are low, it is almost impossible for the associations to maintain a very elaborate system of contacting and educating the members. Education is carried on very largely through letters and meetings. Social activities are limited to annual meetings, and in some cases the annual meetings are not of the entire association but are held by locals. As a whole, members are

not very well acquainted with their associations and the officers and directors. With so little direct contact between the member and the association, the member does not become properly acquainted with his organization and looks upon it too much as a stranger to him and not as part of his business. Methods of reaching members used by associations of each of the four markets will be taken up separately in order for the picture for each market to be as complete as possible.

AKRON

House organs or full time field men have never been used in this market. Some visits are made but no attempt is made to visit any large proportion of the members in a year's time. A yellow card with prices and some other marketing information is sent out monthly by the Milk Producers' Association of Summit County and Vicinity to the members. Such things as meeting announcements, base changes, and quality control hints are included on these cards. The cost of these cards amounts to between 10 and 15 cents per producer per year. Circular letters are sent only to the board of directors.

Each local of the above organization is required to have at least one meeting per year and this meeting is attended by an association representative. Most of the locals hold at least one extra meeting per year. These meetings are attended by an average of about 60 per cent of the members, which means that about this percentage comes in direct contact with a representative of the association in addition to the local members of the board of directors. The annual meeting is attended by 500 to 700 producers of the total membership of over 2700. This is a business and social meeting combined and a large portion of the time is used for educational purposes. The association does not have advisory councilmen, but each of the 54 locals has a director who holds about the same place in contacting the members as advisory councilmen in most associations.

The only records kept of the individual's production are on a card which shows the member's base and date when changed either by the adjustment committee or by change in his production. Complete records of sales and prices are kept for the entire association but not for the individual member. In case of grievance of a member the association must go to the dealer for the member's records. Under their present method of setting bases, where a fixed base with a horizontal raising or lowering of all bases is used, individual records are not so important. They will become of more importance if it is ever desired to change the type of marketing plan.

DAYTON

The Miami Valley Cooperative Milk Producers Association issues a publication for its members which was originally published monthly but during the last few years issues have been published only at irregular intervals. This paper usually contains four or six pages at a total cost of a little over 2 cents per copy including postage. For a time advertising space was sold but it proved that costs of securing this business about equaled the returns and so it was discontinued. This publication is devoted largely to market facts, figures, and news. Some interesting photographs and educational material concerning use of milk are included. Quality production suggestions are included in most issues. Notes and facts from other markets and excerpts of interesting articles are also placed in the publication, as well as miscellaneous matter and announcements. The reaction of the members toward this publication is very

complimentary and indicates it to be an economical way to contact the producer. Very few members thought the publication to be unnecessary and practically all members said they read it very thoroughly and considered it well worth while. They were able to get information from this source which they would otherwise not be able to get. A very definite personal interest was noted among the members in their publication. The manager and secretary have always been responsible for its publication.

Between 1200 and 1500 farm visits are made each year. These visits are for varied purposes, the field man serving for any requested visits as well as for regular visits. Only five circular letters were sent out to the entire membership in the year prior to this study. Some special circular letters are sent to locals or sections concerning local or sectional problems. The circular letters are sent to all producers selling through the association.

An average of two meetings is held at each local per year. A representative of the association attends each meeting at which definite programs are arranged. At these meetings discussions or explanations are offered the producer relative to the functions performed by the association. The base and surplus plan is discussed in detail and any change which may have been made in it is explained. Attendance at these meetings averages about 30 to 35 per cent of the membership. The annual meeting is attended by about 1500 to 2000, including families of the producers. These meetings combine business, education, and social functions. Much effort is made to make the meeting interesting so that the members will come out. Special speakers are obtained and lunches served at the association's expense.

The Buckeye Independent Dairy Farmers' Association contacts its members mainly through letters. The members are allowed to vote by proxy if they do not wish to attend the meetings.

A fairly complete set of records is kept in the office of the Miami Valley Cooperative Milk Producers Association so that when a member has a grievance or any significant change is to be made in the market the records are such as to present needed facts. A particularly valuable set of individual producer records is kept which will prove of increasing value as they accumulate. Cost of keeping this set of records is not figured separately from expense of other office work.

PORTSMOUTH

No publication is put out by the association but a monthly letter goes to each member; this contains the summary of uses by classes and price and also total volume received in the market. Quality production and market facts are also included, as well as announcements and miscellaneous notes. In addition to the regular monthly letters special letters are sent out—usually about three or four per year.

The manager acts as field man and visits each member twice per year on an average. The locals hold four or five meetings per year, most of which are attended by an association representative. Attendance averages about 50 per cent of membership. The annual meeting is attended by 125 to 400 (including families), at which time the directors are elected. The primary purpose of this meeting is for election and very little time is devoted to education and outside speakers.

Market records are kept in detailed form by the association but production records of the individual producer are not kept. The records are kept and accounting is done by the manager. The association has only 240 members and an expensive office setup would be burdensome.

COLUMBUS

The Scioto Valley Cooperative Milk Producers' Association uses space in the Ohio Farm Bureau News each month for price announcements and news of a nature usually contained in association publications. A copy of this monthly paper is sent to each member and paid for by the association. The cost to the association is less than 2 cents per copy. The amount of space used varies from about one-half to one page per month. One disadvantage of this method of attempting to reach the member is that the association's space is only a part of the publication and does not impress the members as forcibly as their own publication would. However, there is the advantage of having the association news read by farmers other than association members. In addition to these columns in the Farm Bureau News, an average of six or seven circular letters per year is sent to all members. These letters contain special announcements or explanations of problems of the association. Some special letters and reports are sent to advisory councilmen only.

The officers and manager of this association do all the field work. Usually there are not more than 200 visits made annually unless a membership drive or something special calls for more visits. Full time or even part time field service men have never been a part of this association's program due mainly to desire to save expense to the association.

All locals hold at least one meeting per year and some as high as four or five. About 15 local meetings were attended by some representative of the association in the last year. Attendance at these meetings varies from 5 to 80 per cent of their membership, with an average of about 30 per cent for all locals. In most cases no definite program is arranged for these meetings and many of the members thought this was a mistake as the meetings seldom got down to business until about time to adjourn. There is no general annual meeting of the whole association. Election is held at the annual meetings of the locals which are attended by only slightly over 30 per cent of the members. Some educational work is done at the local meetings but usually they are mostly business meetings. Some few of the locals have meetings after each of the four advisory council meetings in order that the members may be informed of what transpired at the meeting.

The Columbus Milk Producers' Association sends about 12 letters to its members per year. Special reports of any kind sent out are sent to all members. About 25 local meetings are held in a year's time by this association, all of which are attended by some association representative. The average attendance in these meetings during the last year was about 60 per cent of the membership. The annual meeting is a combination business, educational, and entertainment meeting. Election is not held at this meeting. Special speakers are used and about one-third of the program is devoted to education. The attendance is about 25 per cent of total membership.

Field service of a general nature is done by one full time and one part time field man. Each member is visited at least once per year.

MEMBER REACTION TO ASSOCIATION CONTACTS

Association literature.—Very few members disregard entirely the literature sent out by their association. Only 37 of the 652 producers interviewed said they read none of the literature received. The care with which each member reads the letters and other literature differs widely but there is very little basis of measuring this. Ninety-four per cent of all members inter-

viewed reported reading the literature received from their association. Regardless of the fact that many members probably did not spend much time on this reading, it still appears that this is a very effective way of reaching a high percentage of the membership.

TABLE 21.—Attitude of Members Toward Having Their Own Association Publication and Number Expressing Each

Attitude	Market				Total*
	Dayton	Akron	Portsmouth	Columbus	
Favorable.....	138	89	15	37	279
Unfavorable.....	16	89	48	130	283

*Only 562 members expressed themselves on this question.

As will be seen from the above data the members of the Dayton Association are very much in favor of the publication from their association. Most of these members have received this publication for several years. They believe this has been a worth while expense and want to see it continued. In the Akron and Portsmouth markets where the associations have not published house organs there is a difference of opinion among the producers. The members of the Scioto County Cooperative Milk Producers' Association were unfavorable to a publication. The majority of these members believed it would prove to be too expensive for a small association like theirs. The same attitude toward an association publication prevailed in the Columbus market. Here the members of the Scioto Valley Cooperative Milk Producers' Association have had the column in the Farm Bureau News as their substitute for a house organ. Most members receiving this believed the extra expense connected with a house organ would hardly be justified as long as the present arrangement could be continued.

Information received from association literature which was most often mentioned by the members included those items on market conditions, price, and announcements and notices. In addition to these, association news, explanations of base setting, and conditions in other markets were mentioned as being of particular interest. The fact that a house organ probably does a better job of getting this news to the producers than circular letters is indicated by the high percentage of members in the Dayton market who are well satisfied with their publication. A total of 59 members thought they got insufficient information from their association to keep them well informed. Of these, 38 were from the Akron market, 13 from Columbus, eight from Dayton, and none from the Portsmouth market. Some of these believed the information received was not of the nature to keep them informed and others thought the type of news was all right but there was not enough of it.

Field visits.—Analysis of member reaction to field visits was made only for the Dayton market as this was the only market where a full time field man had been used for a very long period of time. Even in this market only 36 of the 183 members interviewed had been visited within the year prior to this study. Some of these members had been visited more than once and altogether there were 54 visits made to these 36 members. Thirty-five per cent of the members of Group I was visited, 13 per cent of Group II, and 12½ per cent of Group III.

The nature of the visit, as well as number of visits, is given in Table 22. Signing members and quality control were mentioned most often as the purpose of the visits. Only 13 members in the four markets suggested for further service to their members that the association increase its field service. This question as to whether the member desired increased field service was not asked specifically, but the suggestion for more field service was part of the answer to the general question of what services should be added or eliminated. No member suggested that field service be curtailed.

TABLE 22.—Number of Members in the Dayton Market Reporting Visits Made by Field Men and Nature of These Visits, by Group and by Number of Visits

Group	Visits per member						Total members visited	Total number of visits
	1	2	3	4	5	6		
I.....	15	2				2	19	31
II.....	11	1	1	1			14	20
III.....	3						3	3
Total.....	29	3	1	1		2	36	54

Nature of visit	Group			All groups
	I	II	III	
General.....	8			8
Educational.....	6			6
Sign up.....	3	7	2	12
Market problems.....	2	1		3
Tests.....	2	3		5
Quality control.....	2	7		9
Rerouting.....	2			2
Hauling trouble.....	2			2
Other.....	4	2	1	7
Total visits.....	31	20	3	54

Considerable field work is done by associations in the Portsmouth, Columbus, and Akron milk sheds, but Dayton is the only one of the four sheds where the service is rendered for practically the entire membership in the area. Field visits are expensive per member contacted but are definitely the most effective also. The majority of members appreciate the visits whether by field men or other association representatives and feel that more interest is being taken in them by their organization. However, when they find how much these visits cost they are not so anxious to see this amount added to the association expenses. This heavy expense has been the deterrent factor to most of the associations in adding complete field service. More field work is necessary in some associations than in others, due to the difference in markets and in services performed by the associations.

Meetings.—Attendance at local meetings during the year prior to this study varied from about 33 per cent in the Dayton and Columbus markets to about 60 per cent in the Akron market. Interest in attending these meetings depends on the importance attached to the meeting. The locals in the Akron market have the large share of responsibility in selecting their hauler and the members are very much interested in taking part in this selection.

In the four markets combined the attendance averages about 45 per cent of membership and the average number of meetings attended by each member was 1.27 for the year. Of the 652 members interviewed in this study 199, or 30 per cent, had attended no meetings in the past year. The percentage of members who attended no meetings was 19 in the Akron market, 40 in the Dayton area, 17 in the Portsmouth market, and for Columbus was 39. As will be seen from Table 23, association members in the Portsmouth market attended an average of almost three meetings per year and in the Dayton market the members averaged less than one. This difference is partly due to variation in number of meetings held in different markets.

TABLE 23.—Attendance at Local Meetings and Number of Members Attending No Meetings, as Reported by a Sample of Producers in Four Ohio Markets, by Market and by Group

Market and group	Attendance	Av. per member per year	Pct. of perfect attendance*	Producers attending no meetings
Akron				
Group I.....	115	1.55		7
Group II.....	134	1.20		22
Group III.....	25	0.83		14
Total.....	274	1.27	60	43
Dayton				
Group I.....	63	1.19		10
Group II.....	77	0.73		52
Group III.....	14	0.58		12
Total.....	154	0.84	33	74
Portsmouth				
Group I.....	55	4.23		1
Group II.....	144	2.94		10
Group III.....	26	1.86		2
Total.....	225	2.96	50	13
Columbus				
Group I.....	96	1.32		16
Group II.....	49	0.83		27
Group III.....	31	0.67		26
Total.....	176	0.99	33	69

* Association's estimate.

Each member was asked of what value the local meetings were other than for elections. Elections are part of the value but since this is common to all local meetings it was left out. Some members named several things which they considered of value; others thought there was scarcely any value connected with these meetings. Table 24 enumerates these answers.

The two outstanding values in the minds of the members are discussion of market problems and acquainting the members with association policies. In addition to these, 75 members said they got some educational value from these meetings. The criticisms were mostly to the effect that the meetings were not conducted in a business-like manner. There were also 41 members who thought that, except for elections, the meetings were of practically no value.

Advisory councilmen.—All of the associations in this study have advisory councilmen or men within the local who hold positions amounting to about the same thing. Theoretically this is the advisory board of the association and is the closest connecting link between the association and its members. In most

associations there is one advisory councilman to about 45 or 50 members. The purpose of these advisory councilmen is to keep in touch with the members in their community or local and be able to carry to the association any suggestions of the members. These councilmen are also expected to keep the members informed of the association activities by more full explanation than is possible by letters or publications. It often happens, however, that they know too little about the association and are not as valuable as they might be.

TABLE 24.—Value of Local Meetings, Other than for Election, as Expressed by Members of Cooperative Milk Producers Associations of Four Ohio Markets

	Akron	Dayton	Portsmouth	Columbus	Total
Discuss market problems.....	57	29	33	52	171
Acquaint members with association policies.....	49	23	26	38	136
Educational.....	21	30	9	15	75
Only for elections*.....	5	17	4	48	74
Settle grievances and rumors.....	25	17	6	5	53
General business.....	39	8	.....	1	48
Holds member interest.....	8	2	1	1	12
Of some value†.....	22	31	18	18	89
Of no value.....	18	11	5	7	41
Miscellaneous.....	7	10	3	3	23

*This includes only remarks to the effect that this was the only value of local meetings.

†No specific value referred to by producers in these cases.

It is usually expected that practically all members will know who their advisory councilmen are. Table 25 shows by market and group how many of the 652 producers visited knew who their councilmen were.

TABLE 25.—Number and Per Cent of Members Who Knew Their Advisory Councilman or Local Chairman, by Market and Group

Market	Number				Per cent			
	Group			Total	Group			Total
	I	II	III		I	II	III	
Akron.....	54	89	16	159	73	79	53	74
Dayton.....	43	74	9	126	81	70	37	69
Portsmouth.....	12	41	8	61	92	84	57	80
Columbus.....	56	26	11	93	78	45	24	53
Total.....	165	230	44	439	77	71	39	67

A much higher percentage of Group I and II members knew their councilmen than those members classed as Group III. For all four markets combined, 67 per cent of the members knew their advisory councilmen. This figure corresponds very closely to the 69 per cent of the members who attended at least one local meeting per year. Of the 199 who attended no local meetings, 107 also did not know who their councilmen were. This indicates definitely that most members who do not attend any meetings have very little contact with the association unless through association literature of some kind.

A comparison of the reaction of those men who are either advisory councilmen or officers of the association with the membership in general shows that there is a considerable difference. There were 44 advisory councilmen and

officers contacted in the four markets and of these, 38, or 86 per cent, were in favor of the base and surplus plan as compared to 51 per cent of the general membership. About the same relationship exists relative to other association functions as in the case of the base and surplus plans. This special group of members who are in closer touch with their association than is the general membership is also much better satisfied with the association. Here again 86 per cent was of the opinion that the association had been of definite benefit to them. This is in comparison with 66 per cent for the total 652 members interviewed. Ninety-one per cent of this special group thought market conditions were better due to the presence of their association; whereas for the entire 652 members it was only 61 per cent.

It should be remembered that the 44 members mentioned above are without doubt above the average. Even without their direct connection with the association they would appreciate what the association is doing for them more fully than the members in general. The other members had elected these advisory councilmen because they were expected to be able to represent the members better than any one else. Of the 107 members who neither went to local meetings nor knew their advisory councilmen, only 49 per cent was favorable to their association in contrast to 66 per cent for the total. It would seem, then, that keeping the members well informed about their association proves to be very much worth while to the association.

Where the associations had some real problem to fight and went directly to the members with this problem the members had taken more interest and seemed not only much better informed but distinctly in closer accord with the association. This was very apparent in one of the markets where the association had just recently gone to the members and asked them to help in the fight for better price conditions.

The general impression gained from contacting the membership of the associations in the four markets was that the higher type producers who took interest in the association literature and meetings were well informed; this number amounted to perhaps a third of the members contacted. The remainder of the members had anywhere from a meager understanding of the work of the association to a fair general knowledge. The few who knew practically nothing of the association were the type of members who would not be reached by any type of educational program. Those others who were only fairly well informed could no doubt be reached by a more complete program of education. Another rather definite impression gained was that much more contact and educational work are necessary in those associations performing more services than in those where only a few services are rendered. Due to the difference in services performed in the different associations and markets, a direct comparison of the membership relations program of different markets is not attempted.

COOPERATIVE PURCHASING OF SUPPLIES

The Miami Valley Cooperative Milk Producers Association in Dayton and the Scioto County Cooperative Milk Producers' Association in Portsmouth handle dairy supplies for their members. The association in Dayton has made this an important part of its work and handles almost a complete line of supplies. The associations are able to buy these supplies and sell them to the members at a big saving. In the Columbus and Akron markets the producers' associations do not handle any supplies but a few of the larger distributors in these markets furnish their producers with supplies at a material saving.

In the Miami Valley Cooperative Milk Producers Association the supplies handled in 1935 amounted to \$7635. These supplies consisted of cans, pails, strainers, cotton strainer discs, chemical sterilizers, scales, stirring rods, milk carts, stock spray, and thermometers. The association estimates that the saving to its members on these supplies amounts to about 40 per cent. The Scioto County Cooperative Milk Producers' Association sold \$1055.53 worth of supplies to its producers during the fiscal year ending July 31, 1935. This is an average of about \$4.40 per member per year.

That the members take advantage of this service of their association can be seen by the volume of supplies purchased in this way. The members evidently do not associate the handling of supplies with the other functions of the association. Only one member in the Portsmouth market and none in the Dayton market mentioned the cooperative buying of these supplies as one of the benefits realized from their association. If members had been asked directly whether they thought they had been benefited by buying supplies through the association, no doubt all members who bought their supplies in this way would have answered in the affirmative. The fact that they purchased their supplies in this way is evidence of their satisfaction with it.

LEGISLATIVE ACTIVITIES

As stated in a former section the legislative work for the associations in the four markets under study is taken care of largely through the State and national organizations of associations. Of the eight associations in existence in the four markets at the time of the study, three were members of both the National Cooperative Milk Producers Federation and the Ohio Milk Producers Federation, two others were members of only the State organization, and three were members of neither. The national organization takes care of all the national legislation and sometimes assists in State legislation which may have a nation-wide effect. The State organization deals directly with only State legislation. On some occasions this organization has had the member associations request their producer members to send in letters of protest or approval to certain prospective legislation. About 81 per cent of all the association members of the four markets is represented by both the State and national organizations, about 94 per cent by the State organization alone, and about 6 per cent is represented by neither. None of the associations were working on legislative matters as an individual association.

DAIRY COUNCIL WORK

Previously in this study brief mention has been made of the participation of the associations in Dairy Council work. Portsmouth was the only one of the four markets in which no work of this kind was being done in 1935.

Sixty-three per cent of the members interviewed in the Akron, Dayton, and Columbus markets was definitely favorable and only 25 per cent unfavorable to the Dairy Council work. The differences among markets in percentage of members favorable were not so great, except in the Columbus market. In that market only 57 per cent was favorable, 23 per cent was unfavorable, and 20 per cent of the members was undecided, due mostly to the fact that they did not understand very well what type of work was done by the Dairy Council.

TABLE 26.—Attitude of Members Toward Association Expenditure for Dairy Council Work and Number and Per Cent of Producers Reporting Each*

Division	Number			Per cent		
	Favorable	Unfavorable	Undecided	Favorable	Unfavorable	Undecided
By market						
Dayton	124	41	18	68	22	10
Akron	139	62	15	64	29	7
Columbus	100	41	36	57	23	20
By group						
Group I.	156	27	17	78	13	9
Group II.	164	75	37	59	27	14
Group III.	43	42	15	43	42	15
Total	363	144	69	63	25	12

*No deduction for Dairy Council work is made in the Portsmouth market.

Groups were combined for the three markets to arrive at the variation as affected by groups. Seventy-eight per cent of Group I, 59 per cent of Group II, and 43 per cent of Group III were favorable to expenditure for Dairy Council work. This last group was almost evenly divided, as 42 per cent was unfavorable.

An answer coming from most members who were favorable was that it was about the only way in which their product was advertised and they thought it paid to advertise. Those unfavorable usually gave the answer that this should be an expense of the dealers, as the product belonged to the dealers after it was sold by the farmer.

GENERAL REACTIONS OF MEMBERS TO ASSOCIATION

REASONS FOR JOINING

When asked why they had joined the association 288, or almost half the members interviewed, gave one of their reasons as believing in cooperation. This is a very significant figure since those producers who believed in cooperation in the start will probably support the association's program and need much less education. This is shown up by the fact that of the 288 giving this answer 82 per cent is still favorable to cooperation and feels that their association has done a good job.

The reasons for joining, as given by members, are summarized in Table 27. Next to belief in cooperation is that of compulsion. In two of the markets in particular if the producer wished to sell milk he had to join an association before the dealer would buy his milk. This was particularly true in the Akron market where the older association has had full-supply contracts for some time. The fact that it was compulsory to join an association in order to sell milk to certain dealers does not mean that those producers did not desire to join. This was true in some cases but by no means in a majority of cases. Many of these members were just as much pleased with their association as other members. Those members who said they were talked into joining had been persuaded by some field representative. The remainder of the reasons given are self-explanatory. Not infrequently members gave two or more reasons why they joined. This accounts for the fact that the total number of reasons given is much higher than the number of members interviewed.

TABLE 27.—Reasons Given by Members for Joining the Association and Number Reporting Each, by Market

Reasons given	Akron	Dayton	Ports- mouth	Columbus	Total
Believe in cooperation	65	102	40	81	288
Compulsory	139	31	19	34	223
Because neighbor did	31	7	13	17	68
To get a better market	35	12	.....	11	58
Hope to get a better price	12	13	5	22	52
Talked into it	3	25	2	8	38
Miscellaneous	10	14	1	21	46

Sometimes promises are made to producers to get them to join an association. Only 88 of the 652 members said definite promises had been made. These 88 members reported a total of 110 promises. Table 28 summarizes these promises by market and also shows in how many cases the member felt the promise had been kept.

TABLE 28.—Promises Made to Producer at Time of Joining the Association, Promises Kept by Association, and Number of Producers Reporting Each, in Four Ohio Markets

	Akron	Dayton	Ports- mouth	Columbus	Total
Promises made:					
Better price	10	13	2	24	49
Sure market for their milk	1	7	1	3	12
Better market condition	5	7	1	6	19
Miscellaneous and general	2	9	2	17	30
Promises kept:					
Better price	2	4	2	10	18
Sure market for their milk .....	.....	6	1	2	9
Better market condition	4	3	.....	3	10
Miscellaneous and general	1	1	2	6	10

Higher price was the most usual promise and also the promise which had proven most difficult to keep. Of the 49 members who said they had been promised better price, only 18, or slightly over a third, believed their association had made good on that promise. A much higher percentage who said they had been promised a sure market for their milk and better market conditions reported the association as having fulfilled the promise.

MEMBERS' ATTITUDE TOWARD THEIR ASSOCIATION

There were 359 of the members interviewed who had been members of their association almost from its start, and 294 of these stated they had been satisfied with the association during its early period. In Table 29 these data are given by market.

Of the Group I producers who had been members from the start, 93 per cent had been satisfied with the association during its early existence. The corresponding percentages for Group II and Group III were 85 and 80, respectively. Table 30 shows how the members' attitudes have changed since they first became members of their association. This includes all members regardless of when they had become members.

TABLE 29.—Number and Per Cent of Members Interviewed Who Had Been Members During the Early Existence of Their Association and Their Attitude Toward the Association at That Time, by Market

Market	Members from start of association		Attitude	
	Number	Pct. of total	Satisfied	Dissatisfied
Akron.....	68	31.5	54	14
Dayton.....	86	47.0	71	15
Portsmouth.....	62	81.5	43	19
Columbus.....	143	80.8	126	17
Total.....	359	55.0	294	65

TABLE 30.—Change in Members' Attitude Toward Their Association Since First Becoming a Member and Number Reporting Each, by Market and Group

Market and group	Attitude					
	Number			Per cent		
	More favorable	Less favorable	Same	More favorable	Less favorable	Same
Akron.....	67	48	101	31	22	47
Dayton.....	67	36	80	36	20	44
Portsmouth.....	48	6	22	63	8	29
Columbus.....	37	37	103	21	21	58
Four Markets						
Group I.....	98	25	90	46	12	42
Group II.....	99	70	156	31	21	48
Group III.....	22	32	60	19	28	53
All groups.....	219	127	306	34	19	47

The purpose of this table is to show change in attitudes. It is not a definite measure of members' satisfaction with their association. Some of the members who are more favorable are not entirely satisfied and also some of those who are less favorable are still favorable to the association. The group who said they had not changed their attitude included both satisfied and dissatisfied members. This group included 306 members, or 47 per cent of the total; 219 members, or 34 per cent, were more favorable; and 127, or 19 per cent, were less favorable. One very significant thing brought out is the difference among groups.

Members were asked what the reason was for their change in attitude. A few who had changed their attitude could give no reason, but the majority had something definite in mind and these reasons are summarized in Table 31.

The reason given most often for being more favorable was that the association was doing more now. In other words, the association had developed to where it could accomplish more for the members. Twenty-seven members said they understood their association better now and realized its benefits more than at first. The reason stated most often for being less favorable was that they believed the association was making very little progress. Only five mentioned failure to keep promises as their reason for being less favorable.

TABLE 31.—Reasons Given by Members for Being More or Less Favorable to Their Association Now Than When First Joining and Number Reporting Each, by Market

	Akron	Dayton	Portsmouth	Columbus	Total
For being more favorable:					
Doing more now	14	15	16	4	49
Understand association better	12	6	2	7	27
Stronger now	5	13	2	4	24
Getting better prices	7	9	6	.....	22
Helped stabilize market	11	.....	1	5	17
Working more for producer	6	3	2	3	14
Miscellaneous	4	8	11	4	27
Total	59	54	40	27	180
For being less favorable:					
Making no progress	12	8	4	5	29
Dealer domination	5	4	.....	1	10
Lower price	3	2	2	2	9
Failed to keep promises	2	.....	.....	3	5
Miscellaneous	14	11	.....	11	36
Total	36	25	6	22	89

Of the 652 members interviewed in all four markets, 46 had had some part in organizing one of the associations. Most of these members had had only some minor part, such as signing a few members. Only five, or 11 per cent, of these 46 members were at present unfavorable to the association and its policies. In comparison to this figure 26 per cent of the total interviewed was unfavorable to the association. Thirty-eight of the 46 members who had helped in some way with the formation of the association were from Group I, eight were from Group II, and none from Group III.

CHANGES DESIRED IN ACTIVITIES OF ASSOCIATION

The changes desired in association activities varied considerably among markets due to the wide variation in activities of associations in the different markets. In obtaining these suggestions the member was not asked specifically about any activity but left to suggest what he thought should be added or eliminated. In preceding sections of this study will be found more complete data on some of these individual activities where the members were asked more specifically what they thought about them. This part of the study was for the purpose of determining what were the most desired changes which the members were thinking about.

Testing is done in all but the Akron market and here 32 members mentioned this as one activity to add. Distribution of their own milk was mentioned by 29 members, 19 of whom were in the Dayton market. Twenty-one members thought their association should handle its own surplus rather than sell it to the dealers.

From Table 32 it can be seen that there was little desire to eliminate or curtail any one activity. Eleven members wanted expenses cut down but had no definite activity in mind from which this saving should come. There were many miscellaneous suggestions, some of which were constructive, but these were mostly the expression of some idea which could hardly be considered a reasonable suggestion. Due to the wide diversity of these suggestions they could not very well be classified, except as miscellaneous.

TABLE 32.—Suggestions by Members of Activities to Add to or Eliminate from What Their Association is Now Doing

	Market				
	Akron	Dayton	Portsmouth	Columbus	Total
Activities to add:					
Distribution.....	2	19	1	7	29
Testing.....	32	.....	.....	.....	32
Handle own surplus.....	2	3	5	11	21
Advertising.....	7	2	2	1	12
Publication*.....	10	.....	.....	7	17
Field man.....	3	2	.....	8	13
Closer check on dealers.....	10	1	1	1	13
Reroute or more trucking control.....	5	1	1	9	17
Miscellaneous.....	34	14	19	11	78
Total.....	105	42	30	55	232
Activities to eliminate or curtail:					
Publication.....	.....	5	.....	.....	5
Advertising.....	1	2	.....	.....	3
Reduce expenses†.....	.....	10	1	.....	11
Miscellaneous.....	9	13	.....	2	24
Total.....	10	30	1	2	43

*This is more thoroughly analyzed in Table 21. The figures in the above table include only those who suggested adding a publication without being asked specifically about it.

†Those who answered in this way had nothing specific in mind—only expenses in general.

It is very interesting to note that testing and control of hauling were not mentioned by any member as a service to eliminate. However, when asked directly about these two functions there were some producers who thought they would be better off if their association were not controlling hauling, but there were only nine members who thought testing was less accurate when done by the association.

MEMBERS' OPINIONS OF ACCOMPLISHMENTS AND BENEFITS OF THEIR ASSOCIATION

Associations are organized with the view to bettering some of the conditions in the market which are believed to be unsatisfactory. In attempting to determine what some of these unsatisfactory conditions were, each member interviewed was asked what conditions he thought were unsatisfactory in that particular market prior to organization. Many members said they couldn't remember and many others said conditions were satisfactory at that time as far as they were concerned. As explained in the introduction the majority of associations was organized between 1920 and 1925. Prices had fallen during 1920 and 1921 and there was more dissatisfaction at this time due to price than to anything else. Consequently, more members remembered prices as the outstanding unsatisfactory condition.

The unsatisfactory conditions reported by members are listed in Table 33. Unstable market, low butterfat tests, and excessive domination of the market by dealers rank in order after low prices as the most often mentioned unsatisfactory condition. Hauling rates were mentioned by only eight members in all four markets. The hauling rates were high but did not constitute a very high percentage of the producer's dollar. Hauling charges did not become particularly burdensome until the price of milk had gone to extreme lows after 1930. Although considerably less than half of the members interviewed remembered much about the conditions in the market before organization, the data in this table represent a sufficient number of members to be representative of the association membership.

TABLE 33.—Some of the Unsatisfactory Conditions in Their Market Before the Association Was Formed, as Reported by Members, and Number of Members Reporting Each, by Market

Unsatisfactory conditions	Market				
	Akron	Dayton	Portsmouth	Columbus	Total
Low prices.....	31	26	18	29	104
Dealer domination.....	16	20	10	13	59
Unstable market.....	12	14	12	16	54
Low butterfat tests.....	1	24	6	19	50
Lack of producer control.....	1	9	7	3	20
Producer cut off.....	4	6	7	2	19
Hauling rates.....	1	5	1	1	8
Total.....	66	104	61	83	314

The data in Table 34 show what benefits the members believe they have received from their association. Of the 865 reports of benefit, as given by the 652 members, 346 were to the effect that the price had been helped. One hundred forty-seven members believed the market had been made more stable, 125 thought testing was done more accurately, and 128 members gave better hauling arrangements as one of the benefits.

TABLE 34.—Benefits Realized from Their Association, as Reported by Members, and Number Reporting Each, by Market and Group

Market and group	Better price	Stabilized market	More accurate testing	Better hauling arrangement	Miscellaneous	Total*
Akron.....	87	58	4	17	53	219
Dayton.....	111	41	51	56	30	289
Portsmouth.....	54	23	1	5	17	100
Columbus.....	94	25	69	50	19	257
Four Markets						
Group I.....	129	65	56	62	47	359
Group II.....	178	72	47	47	61	405
Group III.....	39	10	22	19	11	101
Total.....	346	147	125	128	119	865

*Total number of benefits reported exceeds total number of members interviewed, because some members named two or more benefits.

There was some difference among groups as to how much credit they gave their association for benefits received. For Group I with a total of 213 members, 359 benefits were reported, or an average of 1.7 per member in this group. In Group II with 325 members, 405 reports of benefits were given, making an average of 1.2 per member. Group III included 114 members with only 101 benefits stated, or 0.9 per member.

The column headed "Miscellaneous" includes many individual benefits, such as helping the individual to hold his market and rendering some special help to the individual. Members who reported these types of benefits were usually enthusiastic about their association because the value of the association to them had been demonstrated in a forcible way. The "Miscellaneous" column also includes eight answers that guarantee of payments was one of the benefits received. This is a specific guarantee only in the Akron market but in effect is practically guaranteed in most of the associations included in this study.

Members were asked to name the things they thought the association had failed to accomplish. There were fewer than half as many of these as those answers stipulating benefits. In Table 35 these data are summarized by markets.

TABLE 35.—Line of Activities in Which Some Members Feel the Association Has Not Accomplished the Desired Results and Number of Members Stating Each, by Market

Activities or services	Market				
	Akron	Dayton	Portsmouth	Columbus	Total
Higher price	50	32	4	18	104
Fair base adjustment	13	16	3	5	37
Cut dealer spread	16	12	3	4	35
Better control of hauling and testing	13	11	.....	8	32
Destroy dealer domination	17	3	3	7	30
Control surplus	3	11	6	7	27
Stronger organization	12	4	.....	6	22
Distribution	1	6	1	1	9
Close check on dealer	5	.....	2	.....	7
Miscellaneous	23	14	3	16	56
Total	153	109	25	72	359

More members mentioned failure of their association to obtain a higher price than anything else. Adding the 104 who mentioned this to the 346 who mentioned better price as one of the benefits realized, it will be seen that a total of 450 out of 652 members mentioned price one way or the other. This is rather conclusive proof that members are thinking of their association in terms of dollars and cents advantage to them. No doubt, there are other functions of associations just as important as obtaining a higher price for milk which will benefit the member materially. In spite of this, associations will have trouble convincing their membership of their value unless they show that they can have some control over prices.

The members who thought their association had not accomplished the desired results did not all believe the association had completely failed in these activities. Some merely believed the association had not accomplished all that was possible; however, some thought their association a complete failure in some of the activities.

PRODUCERS' OPINION OF LIMITING MILK SHED OF MARKET

Association members were very much in favor of limiting the milk shed of the market in order to control the supply of milk coming to the market. Of all members interviewed, 517 thought this should be done and 91 thought it should not. Only 44 voiced no opinion on this matter. There was no significant difference in the attitude of members of the associations of the four markets concerning this. Most members thought those producers who had gone to the expense necessary to pass inspection required in the market were deserving of some protection.

The majority of members thought the most logical and sensible way to protect the market for those already selling was by setting a distance limit. The expense of hauling the milk the extra distance and the fact that they felt their location close to the market gave them a right to the market were two of the chief reasons given for limit by distance. They argued that plenty of milk could be produced for the market without going farther out for supply. This method of limiting the shed was advocated by 380 members.

TABLE 36.—Members' Opinions of Limiting the Milk Shed and Methods Suggested by Which to Limit It and Number of Producers Reporting Each, by Market

Producer opinion	Market				
	Akron	Dayton	Ports-mouth	Columbus	Total
Limit shed:					
Yes.....	175	145	66	131	517
No.....	36	14	7	34	91
No opinion.....	5	24	3	12	44
Method of limiting:*					
By distance.....	140	97	24	119	380
Refuse new members.....	39	40	20	42	141
Other ways.....	7	13	19	9	48

*Some suggested more than one way to limit the shed. The total suggestions therefore exceed the 517 who would limit the shed.

There were 141 members who thought the limiting of supply could be accomplished by the associations refusing to take on new members. This group of members felt that it should be one of the functions of the association to protect the present members in this way. Most associations have been forced at times to take on new members when the milk was not needed in the market to protect the market from the danger of price cutting. Most of those members who believed new members should be refused probably were overlooking the possible necessity of protection from price cutting which might develop.

Part of the 91 members who thought the milk shed should not be limited were on the edge of the present shed and had had trouble at some time in holding their market or obtaining a market. The majority, however, were those farmers who do not believe in interference with free competition. They said it was not right to attempt to deprive any farmer of a chance for any market he might wish to avail himself of.

STATE CONTROL OF MILK MARKETING

At the time the association members were interviewed for this study the Ohio milk marketing control law had been in effect for almost 2 years. Practically all members were well aware of the law, but some members knew very little of the details except as had been given to them by their association. A large majority of members looked upon State control as an agency to raise prices to producers. Price rose materially under State control⁷ and most members gave the credit largely to the Milk Commission created by the law. Sixty-

⁷For further detail see Mimeographed Bulletin 70, Department of Rural Economics of the Ohio State University and Ohio Agricultural Experiment Station, "Summary of Ohio Milk Marketing Agreements in 55 Areas in Ohio." Also supplement to Bulletin 70.

four per cent of the members interviewed was definitely favorable to State control while 16 per cent was unfavorable to such control. The remaining members were undecided.

As can be seen from Table 37 the members classed as Group I were most favorable to the control by State and those in Group III were least favorable. There was very little difference in the three groups in per cent of unfavorable members. In Group III, 30 per cent of the members was undecided but only 12 per cent of the members of Group I was undecided. This can be accounted for partly by the fact that there were more Group III members who knew but little about State control and therefore were undecided.

TABLE 37.—Attitude of Members Toward Legislative Control of Milk Marketing in Ohio, by Market and Group

Market and group	Number			Per cent		
	Favorable	Unfavorable	Undecided or no opinion	Favorable	Unfavorable	Undecided or no opinion
Akron	149	39	28	69	18	13
Dayton	133	20	30	73	11	16
Portsmouth	48	16	12	63	21	16
Columbus	86	32	59	49	18	33
Four Markets						
Group I	154	33	26	72	16	12
Group II	201	56	68	62	17	21
Group III	61	18	35	54	16	30
Total	416	107	129	64	17	19

Members were asked how they thought State control had affected their association. These answers were classified under three groups and appear in Table 38.

TABLE 38.—Members' Opinions of How Legislative Control Affected Their Association from July, 1933, to July, 1935, by Market and Group

Market and group	How affected					
	Number			Per cent		
	Helped	Hindered	No effect or undecided	Helped	Hindered	No effect or undecided
Akron	102	24	90	47	11	42
Dayton	127	1	55	69	1	30
Portsmouth	32	2	42	42	3	55
Columbus	58	7	112	33	4	63
Four Markets						
Group I	139	9	65	65	4	31
Group II	153	22	150	47	7	46
Group III	27	3	84	24	3	73
Total	319	34	299	49	5	46

Just slightly less than half of the members believed it had been a help to the association either by stabilizing the market or by helping the association to obtain a higher price. By stabilizing the market is meant the elimination of

price cutting and other unfair competitive practices which reflect to the producers' disadvantage. Only 34 members thought State control had harmed the associations in any way.

The results as shown in Table 38 bring out the fact that the Group I members have a much more decided opinion of the effect of State control than members of the other groups. Sixty-five per cent of this group thought their association had been benefited and 31 per cent was undecided. Group II members were almost evenly divided between those believing State control a help and those undecided. Only 24 per cent of Group III members was of the opinion that control by the State had helped and 73 per cent was undecided. The 34 members who believed State control had harmed their association thought the harm had been done by having some of the association functions taken over by the Milk Commission and local control boards, thereby undermining the association. This is more fully taken up in Table 39. In addition to this, some of the members thought the commission, by recognizing new associations which had started up as competitors of the existing associations, helped the new associations and thereby weakened the old established ones.

TABLE 39.—Members' Opinion of Whether or Not Legislative Control of Milk Marketing Will Lessen the Need of Cooperative Milk Marketing Associations, by Market and Group

Market and group	Opinion					
	Number			Per cent		
	Will	Will not	No opinion	Will	Will not	No opinion
Akron.....	76	93	47	35	43	22
Dayton.....	71	64	48	39	35	26
Portsmouth.....	15	40	21	20	53	27
Columbus.....	35	106	36	20	60	20
Four Markets						
Group I.....	56	136	21	26	64	10
Group II.....	105	134	86	32	41	27
Group III.....	36	33	45	32	29	39
Total.....	197	303	152	30	47	23

Whether or not the need for associations would be lessened by State control was asked of each member. In the opinion of 30 per cent of the members it would definitely lessen the need. There was but little difference in the percentage of members of each of the three groups who looked upon State control in this way. Three hundred and three members, or 47 per cent, thought State control would not lessen the need of associations in rendering most of the functions for the members which are now rendered by the associations. A much higher percentage of Group I members was of this opinion than in either of the other two groups.

From a study of Table 39 it will be seen that there is a marked difference in the way association members from different markets felt about this question. In the Dayton market only 35 per cent of the members thought State control would not lessen the need of an association, in Akron 43 per cent, in Portsmouth 53 per cent, and in Columbus 60 per cent. There was an almost direct relationship between the members' attitude toward State control and their opinion of whether the State control could displace the associations or at

least make them less essential. Members in the Dayton associations were most favorable and a relatively high per cent thought the need for the association would be lessened by State control. Just the opposite was true of the members of the Columbus associations.

The impression gained in talking with association members in the four markets was that a large majority would like to see such control continued. Even of those members who were unfavorable, only a few thought their association had been hindered materially by such control. Almost half of those members who would like to see control by the State continued thought the association would no longer be necessary and that the commission would be able to obtain the desired results with less expense. Most of the members in Group I and many of those in Group II thought there was very definitely a place in the market for the association along with State control.

SUMMARY

Milk marketing associations in Ohio have been an important factor in the marketing of milk since about 1916 and especially so from about 1922 or 1923. There were 46 of these associations operating during 1935, and, of these, 24 had been organized after the enactment of the State milk marketing control law. In addition to these 46 associations which handle whole milk, there are two associations which handle only sour cream. Approximately 45 per cent of the farmers selling whole milk in Ohio is selling through cooperative organizations.

All four markets in which this study was made were using the base and surplus plan of attempting to adjust supply to demand in the market. Records of a nature which might help in measurement of the success of the plans are not complete enough to warrant definite conclusions. Fifty-one per cent of the members interviewed thought the base and surplus plan used in their market was proving of value to them and 37 per cent was unfavorable to such plans. The remaining 12 per cent gave no definite opinion.

Almost complete control of sampling and testing is exercised by the associations in the Dayton and Columbus markets. In Portsmouth testing only is done by the association, and in Akron neither is controlled by the associations. Complaints by members about their test have decreased materially since this has been done by the associations. Most of the abuses which were prevalent in testing previous to association control have been eliminated. Along with this actual improvement there is the element of members' confidence in the testing as done by their own association.

Columbus is the only one of the four markets in which the associations exercise but little control over hauling. In the other three markets hauling is controlled almost completely by the associations.

Very little work has been done on quality improvement by the associations of the four markets. This work has been carried on by the local health boards and the association program along this line has been mostly that of keeping their membership informed of the requirements of these health boards.

In the four markets combined 94 per cent of the members stated that they read all or part of the literature sent out by the association. Only one association has a house organ and it has not been published regularly during the last year or so. Only 36 of the 652 members interviewed had been visited by a field man or officer of the association during the last year. Local meetings were attended by an average of 45 per cent of the members in the four markets combined. The method relied on mainly for contacting the members has been by association literature. Although this has the disadvantage of being rather impersonal, it has the advantage of being economical.

Dairy supplies are purchased by associations in the Dayton and Portsmouth markets at an estimated saving of about 40 per cent to the members. In these two markets combined the associations handled about \$8700 worth of supplies during 1935.

Legislative activities of the associations are largely handled through the National Cooperative Milk Producers Federation and the Ohio Milk Producers Federation.

Almost the entire expenditure made by the association for advertising milk is spent through the local units of the National Dairy Council. There are units in all the four markets with the exception of Portsmouth.

Some attempt is made by associations in all four markets to limit the milk shed to control the volume of milk coming into the market.

The reasons given most frequently by members for joining the association were belief in cooperation and the necessity of belonging to the association to secure a market for their milk. Other reasons given were: because neighbor joined; to get a better market; hoping to get better price; and because of being talked into it.

Over half of the members had changed their attitude toward their association since joining it. Thirty-four per cent was more favorable, 19 per cent was less favorable, and the remaining 47 per cent still felt the same as when they first joined.

There were 232 suggestions from members of activities which they believed their association should add, and 43 suggestions of activities either to curtail or eliminate entirely. Testing, milk distribution, and handling surplus were the activities most often mentioned which the association should add.

Services or activities mentioned by members in which they thought the association had benefited them were, in the order of their importance, better price, stabilized market, better hauling arrangements, and more accurate testing. Miscellaneous benefits mentioned totaled 119.

Legislative control of milk marketing by the State was desired by 416 members, or 64 per cent of those interviewed. Only 107, or 17 per cent, were unfavorable and 19 per cent had no opinion. Price had risen materially during the two years of operation of the Burk Act and the members attributed these higher prices to the influence of this law. Only 84 members, or 5 per cent, thought the law had in any way harmed their association whereas 40 per cent believed the law had strengthened the association. The remaining 46 per cent thought the association had been neither strengthened nor weakened by the law. It was believed by 197, or 30 per cent, of the members that the need for association was distinctly lessened by State control; 303, or 47 per cent, thought there was just as much need for an association under State control as without. About half of those members who wanted to see State control continued thought the results desired by milk producers could be more economically accomplished by State control.

APPENDIX

PRESENT OPERATING COOPERATIVE MILK MARKETING ASSOCIATIONS IN OHIO FORMED BEFORE JULY 1, 1933*

- 1 The Stark County Milk Producers' Association
offices—Canton, Ohio
2. Milk Producers' Association of Summit County and Vicinity
offices—Akron, Ohio
3. The Dairymen's Cooperative Sales Association
offices—Cleveland and Youngstown, Ohio
4. The Scioto Valley Cooperative Milk Producers' Association
offices—Columbus, Ohio
5. The Northwestern Cooperative Sales Company
offices—Toledo, Ohio
6. The Miami Valley Cooperative Milk Producers Association
offices—Dayton, Ohio
7. Farmers Equity Union Creamery Company
offices—Lima, Ohio
8. North Central Ohio Cooperative Dairy Sales Association
offices—Bucyrus, Ohio
9. The Ohio Farmers Cooperative Milk Association
offices—Cleveland, Ohio
10. The Wooster Farm Dairies Company
offices—Wooster, Ohio
11. The Cooperative Pure Milk Association
offices—Cincinnati, Ohio
12. Fayette County Marketing Association
offices—Washington C. H., Ohio
13. The Scioto County Cooperative Milk Producers' Association
offices—Portsmouth, Ohio
14. The Kentucky, Indiana, and Ohio Milk Producers Association
offices—Cincinnati, Ohio
15. The Northern Ohio Milk Association
offices—Cleveland, Ohio
16. Independent Milk Producers Association, Akron Area
offices—Akron, Ohio
17. Tri-Valley Cooperative Sales Company
offices—Athens, Ohio
18. Milk Producers Union
offices—Cincinnati, Ohio
19. The Columbus Milk Producers' Association
offices—Columbus, Ohio
20. The Dairy Farmers Distributing Company
offices—Columbus, Ohio
21. The Lorain County Milk Producers Association
offices—Elyria, Ohio
22. The Tuscarawas Valley Cooperative Dairy Sales Association
offices—New Philadelphia, Ohio

*As of January, 1936.

PRESENT OPERATING COOPERATIVE MILK MARKETING ASSOCIATIONS IN OHIO FORMED AFTER JULY 1, 1933

1. Defiance County Milk Producers Association
offices—Defiance, Ohio
2. Toledo Fluid Milk Association
offices—Toledo, Ohio
3. Allen County Milk Producers Association
offices—Lima, Ohio
4. Hancock County Milk Producers Association
offices—Findlay, Ohio
5. Shelby County Milk Producers Association
offices—Sidney, Ohio
6. Logan County Dairy Products Association
offices—Bellefontaine, Ohio
7. Miami County Milk Producers Association
offices—Troy, Ohio
8. Buckeye Independent Dairy Farmers' Association
offices—Dayton, Ohio
9. Marion County Milk Producers Association
offices—Marion, Ohio
10. Pickaway County Dairy Cooperative Association
offices—Circleville, Ohio
11. Lancaster Milk Producers Association
offices—Lancaster, Ohio
12. Perry County Milk Producers Association
offices—Somerset, Ohio
13. Ross County Milk Producers Association
offices—Chillicothe, Ohio
14. Ironton Milk Producers Association
offices—Ironton, Ohio
15. Sandusky Cooperative Milk Producers Association
offices—Sandusky, Ohio
16. Dairymen's Products Cooperative Association
offices—Medina, Ohio
17. Ashland County Milk Producers Association
offices—Ashland, Ohio
18. Coshocton Milk Producers Association
offices—Coshocton, Ohio
19. Farmers Dairy Products Company
offices—Brewster, Ohio
Farmers Dairy Products Company
offices—Middlebranch, Ohio
Marlboro Cheese Company
offices—Marlboro, Ohio
Farmers Own
offices—Brewster, Ohio
Brewster Cooperative Dairy Products Company
offices—Brewster, Ohio

These five cheese factories are set up individually as straight stock companies. The overhead organization is set up under the Cooperative Marketing Act.

20. Muskingum County Milk Producers Association
 offices—Zanesville, Ohio
21. Cambridge Milk Producers Association
 offices—Cambridge, Ohio
22. Ohio Independent Milk Producers Association
 offices—Youngstown, Ohio
23. The Dorset Milk Company
 offices—Dorset, Ohio
24. Mahoning Valley Dairy Products Association
 offices—Beloit, Ohio